



PhD Program in Political Theory and Political Science
XXIX Cycle

**“Green” Islam and social movements for sustainability
Socio-ecological transitions in the Muslim world**

Ph.D. Dissertation
by
Donatella Vincenti

A dissertation submitted in partial fulfilment of the requirements for the Degree of Doctor of Philosophy (PhD) at the Department of Political Science, LUISS University Guido Carli, Rome, Italy

LUISS Advisors:

Prof. Sebastiano Maffettone, LUISS Guido Carli

Dr. Marcello Di Paola, LUISS Guido Carli

External Advisor:

Prof. Maurits Berger, LUCSoR

Leiden University, The Netherlands

Rome, December 2016

“Ecological crises [...] present themselves as generalized revolts of the means; no entity – whale, river, climate, earthworm, tree, calf, cow, pig, brood – agrees any longer to be treated ‘simply as a means’ but always insists on being treated ‘always also as an end...it is rather the simple consequence of the disappearance of the notion of external nature’”.

Latour, Bruno. *Politics of Nature: How to Bring the Sciences into Democracy*, trans. Catherine Porter (Harvard: Harvard University Press, 2004), 155–6.

Declaration

By submitting this dissertation electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the owner of the copyright thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

Signature: Date:

Dedication

This work is dedicated to my family's love for its 1,250 sqm plot of land.

Abstract

Sustainability is an overused term in global politics. Yet, deciding on what to sustain indefinitely, and over time, in the face of the current ecological crisis is essentially a matter of moral-ethical concern. The primary objective of this dissertation is to investigate whether Islam, as a religion and spiritual tradition, has something to say about present-day sustainability problems. A secondary, but no less important objective of the present work is to examine the cultural, social, and political aspects of sustainability mobilisation and activism in predominantly Muslim contexts. The qualitative ethnographic study, which is based on fifteen semi-structured interviews and two focus groups conducted between 2015 and 2016, focuses on permaculture and eco-justice movements presently operating in Arab-Muslim countries (namely, Morocco and Tunisia) and uses methodological triangulation of frame and narrative analysis. Its main purpose is to empirically detect whether, among the motivational framing strategies deployed by sustainability movement actors to provide reasons for sustainability engagement and action, there is indication of moral-ethical motives that are consistent with the “eco-Islamic” worldview. The study shows that, especially in the Moroccan case, some religious-spiritual motives echo “eco-Islamic” wisdom and its foundational tenets. Overall, however, the normative and performative nature of Islamic ‘eco-tradition’ is unorthodox and syncretic.

Keywords: eco-Islam; religion; ecology; commons; social movements; sustainability; socio-ecological transitions.

Acknowledgements

Writing a doctoral thesis is an intellectual and emotional challenge that requires passion, expertise and commitment. Insights and fresh ideas came from my scholarly interactions, as well as from simple conversations with various people who, directly or indirectly, in one way or another, influenced my academic journey. I would like to use this page to thank all the people who somehow made the accomplishment of this thesis possible. Although I cannot mention all their names, I would like especially to thank the following people and institutions who have contributed to this dissertation.

My sincere gratitude goes first of all to my Supervisor, Professor Sebastiano Maffettone, who has guided the development and evolution of this doctoral project and has given me the opportunity and confidence to engage in this interdisciplinary work. I also owe deep gratitude to my Co-Supervisor, Dr. Marcello di Paola, who has untiringly advised and continually inspired me throughout these past years. I would also like to express my deep gratitude to my External Co-Supervisor, Professor Maurits Berger, for his willingness to accept me as a Visiting PhD student at Leiden University (Leiden, The Netherlands), as well as for his valuable help, cooperation and support, and for his precious contribution in supervising, reviewing and improving the writing of this thesis. I offer special thanks to Byron Skelton for his great help in proofreading and editing my manuscripts and thesis.

I am also grateful to all the Professors of the LUISS PhD Programme in “Political Theory and Political Science” (XXIX Cycle) – Department of Political Science, and to the Center for Ethics and Global Politics (CEGP) based at LUISS University “Guido Carli”. Thanks to Dr. Domenico Melidoro and to Dr. Valentina Gentile for having supported my research activity, as well as for having coordinated the three-year Doctoral Programme. I am deeply indebted

to Professor Francesca Corrao, who has generously nurtured my scholarly and research endeavors at LUISS University. Her immense knowledge of the discipline has helped me refine my thought and analysis on the present research topic. I would like to extend my gratitude to Professor Leonardo Morlino, who encouraged me to think critically about the subject-matter and gave me enormous help in conducting the empirical research. I would also like to thank Professor Lorenzo De Sio (LUISS), and Professor Paolo Montesperelli (University of Rome “La Sapienza”) for their useful methodological advice and recommendations. In addition, I must acknowledge the substantial contribution of Professor Eva Pförtl, who has assisted me during my fieldwork period and has given visibility to my research thanks to the support of Fondazione Simone Cesaretti. My heartfelt appreciation also goes out to Dr. Daniele Santoro for his interest in my research on the “Islamic commons”. I also wish to express my most sincere gratitude to Khawla Al-Muhannadi for her inspiring speeches on environmental activism in Muslim contexts, and to Professor Giuseppe Carrus (“Roma Tre” University) for his bibliographical suggestions in the area of social and environmental psychology.

Thanks to all my colleagues at LUISS University “Guido Carli” for our constructive conversations and debates. I would like to thank Ali Emre Benli, Sebastián Rudas Neyra, Tehseen Nisar, Silvia Cavasola, Silvia Menegazzi, Cecilia Sottilotta, Giovanni Vezzani, Silvia Mocchi, Antonio Calcara, Chiara Cancellario, Andrea Fumarola, Noemi Trino, Antonella Piccinin, Kostas Athanasiadis, among many others. Many thanks to Mohammed Hashas, Odetta Pizzingrilli, Lorenzo Liso, Simone Sibilio, and Renata Pepicelli for a stimulating working and research environment open to learning and innovation.

Some chapters of this dissertation were presented in conferences and workshops, including “European Science Foundation ESF Rights

to a Green Future Final Conference” (Kontakt der Kontinenten, Soesterberg, NL, October 28th-31st, 2014); “Florence SWIF – Sustainability of Well-being International Forum. 2015: Food for sustainability and not just food” (Florence, Italy, June 4th-6th, 2015); and “Societas Ethica’s 52nd Annual Conference. Globalisation and Global Justice” (Linköping, Sweden, August 20th-23rd, 2015). I am grateful to the speakers and audiences of these events for their valuable remarks and comments.

I also want to extend my thankfulness to the Staff members and PhD members of the Leiden University Centre for the Study of Religion – LUCSoR (Leiden University, Leiden, The Netherlands). Professor Maurits Berger, thank you for having hosted me as a Visiting PhD Scholar during the Fall Semester (A.Y. 2014-2015). Thanks to Associate Professor Erik Bähre for having invited me to the Leiden Global Graduate Workshop (May 12th, 2015), and most importantly for his methodological advice concerning social and anthropological research methodology. Special thanks goes out to Anne Marieke Schwencke for having inspired my research on “eco-Islam”, as well as for having shared her profound knowledge of the topic with me when we met in Leiden in 2015. Thanks to Stella Morgana, Astrid Bodini, Sami al-Daghistani, Hayat Ahlili, Roukayya Oueslati, Johannes Makar, Hanine Omari, Marcela Probert, Michał Prawdzik, Selen Baskara, Ayşe Nazlı van Sooylet, Mattias Brand, Tim Meijers, and all the other colleagues, students and Professors I met in the Netherlands. I owe my deep gratefulness to my Dutch flatmate in Leiden, Myriël Donkersloot, for her welcoming attitude and kindness when I had just arrived in the Netherlands, and, above all, for our memorable discussions on my research topic.

I would also like to express my sincere thanks to my local informants, without whose availability and active cooperation the collection of empirical data would not have been possible. I also thank all the wonderful people I had the pleasure either to meet during my fieldwork in Morocco and Tunisia, or to interview by phone, Skype, or e-mail.

Finally, this work could not have taken place without the deep love, extraordinary patience, and support of my husband Daniele Tiddi, and of my lovely family. I would like to express my deepest thanks to my mother Luisa Bevilacqua, to my father Enrico Vincenti, and to my sister Marianna Vincenti for their moral and material support.

Donatella Vincenti

Rome, December 2016

Table of Contents

Abstract.....	iv
Acknowledgements.....	v
Table of Contents.....	ix
Preface.....	xi
List of Figures.....	xii
List of Abbreviations.....	xii
Synthesis.....	xv
Introduction.....	xxii
i. Research problem, objectives and research questions.....	xxiv
ii. Literature review.....	xxvi
iii. Relevance of the study.....	xxxviii
iv. Methodological outline.....	xxxix
v. Delimitations.....	xlvi
vi. Dissertation outline.....	xlvii
Part I – “Green” Islam.....	1
Section I: Religion and ecology.....	1
Introduction.....	1
1. The global ecological crisis and the greening of religion.....	17
1.1. The ethics of caring for the (ecological) “others”.....	24
1.2. The academic study of religion and ecology.....	30
1.3. Eco-religion and eco-theology.....	37
1.4. Religious change and public theology.....	48
1.5. Eco-faiths in the international debate on sustainability.....	54
Concluding remarks.....	70
2. The rise of “eco-Islam”.....	72
2.1. Islamic eco-ethics: foundational principles and concepts.....	78
2.2. Islamic beliefs and attitudes towards nature.....	91
2.3. Islamic eco-approaches and pioneering efforts.....	111
2.4. Islamic “green” voices within international and ecumenical arenas.....	118
2.5. Muslim global eco-activism and “green” lifestyles.....	128
Concluding remarks.....	140
Section II: Religion, ecology, and the economy of the commons.....	143
Introduction.....	143
3. Natural resources as “commons”.....	151
3.1. Commodifying nature.....	159
3.2. Weak sustainability.....	162
3.3. The commons dilemma.....	169
3.4. Governing the commons.....	173
3.5. Transboundary environmental problems.....	176
Concluding remarks.....	184
4. The “Islamic commons”.....	187
4.1. Commons management systems in Islam.....	193
4.2. Islamic land ownership and management systems.....	199
4.3. Islamic water conservation and management systems.....	203
4.4. Islamic biodiversity conservation and protection systems.....	209
4.5. Islamic rules and teachings for reducing pollution and waste.....	212
Concluding remarks.....	217
Part II – Social movements for sustainability.....	220
Section III: Sustainability movements in Arab-Muslim countries.....	220
Introduction.....	220
5. Sustainable thought and action: the rediscovery of moral agency and motivation.....	231
5.1. Sustainability engagement and activism in Arab-Muslim contexts.....	239
5.2. Permaculture movements.....	242
5.2.1. Morocco: Association 1.....	243
5.2.2. Tunisia: Association 2.....	244
5.3. Eco-justice movements.....	244
5.3.1. Morocco: Association 3.....	245
5.3.2. Tunisia: Association 4.....	246
Concluding remarks.....	247
6. The empirical study: frames and framing strategies.....	249
6.1. Methodology and Procedure.....	249
6.2. Analysis of diagnostic, prognostic, and motivational framings.....	255
6.3. Discussion.....	306
6.4. Concluding remarks.....	315

Conclusion	317
Bibliography	324
Appendices	370
Appendix A	370
Appendix B	374

Preface

Notes on transliteration and translation

Arabic terms are transliterated according to the ALA-LC Romanisation Table – Arabic (2012).¹ Some commonly used words and/or phrases, such as Muslim, Muhammad (the Prophet), Quran/Qur'an, Quranic/Qur'anic,² Sunnah, Shariah/Shari'ah-based, Sunni, Shi'i, and hadith(s), are generally written in the text without diacriticals and unitalicised. As you see in the above list, they appear either in the upper or lower case. Further, it has been adopted as a general transliteration rule that the most frequently used Arabic words and phrases contained in the present manuscript will be transliterated with diacriticals and italicised only at the first occurrence of the term. The second and following occurrences of the same term will therefore be transliterated without diacriticals and unitalicised, unless it is otherwise indicated. Exceptions to the general transliteration rule may be dependent on the specific citation-transliteration style adopted by the different academic scholars and authors mentioned and/or quoted in the present work. Unless otherwise stated, English quotations of the Quran are taken from Abdullah Yusuf Ali, *The Meaning of the Holy Quran* (Beltsville, Maryland, USA: Amana Publications, 10th ed., 1997). All the translations of terms, concepts, phrases, interview and focus group transcripts, as well as of bibliographic references from French/Arabic into English are mine.

¹ The American Library Association and Library of Congress (ALA-LC) Romanisation Table, Arabic, 2012, accessed September 4, 2016, <http://www.loc.gov/catdir/cpsa/romanization/arabic.pdf>.

² The Quranic verses mentioned in the footnotes will follow the pattern "Qur'an, Surah number: ayat number(s)". In all references either to the Quran as a Book or to Quranic verses appearing in the main text, the word "Qur'an" will be transliterated in Arabic only at its first occurrence (See Chapter 2).

List of Figures

Figure 1 The frames used in the sustainability debate initiated by the four selected social movements	311
---	-----

List of Abbreviations

AFED	Arab Forum for Environment and Development
ARC	Alliance of Religions and Conservation
COP	Conference of the Parties (to the UNFCCC)
CPRs	Common-Pool Resources
EMDC	Earth-Mates Dialogue Centre
ESCWA	Economic and Social Commission for Western Asia
ETS	Emission Trading System
EU	European Union
FAO	Food and Agriculture Organization
GHGs	Greenhouse Gases
GIZ	The Deutsche Gesellschaft für Internationale Zusammenarbeit
GMOs	Genetically Modified Organisms
HRH	His Royal Highness/Her Royal Highness
ICEM	Islamic Conference of Environment Ministers
IFEES	Islamic Foundation for Ecology and Environmental Sciences
IIFA	International Islamic Fiqh Academy
IPCC	Inter-governmental Panel on Climate Change
IPCNE	Islamic Principles for the Conservation of the Natural Environment
IPL	Interfaith Power & Light
IRW	Islamic Relief Worldwide
ISESCO	Islamic Educational, Scientific and Cultural Organization
ISRA	Islamic Sciences & Research Academy

IUCN	International Union for Conservation of Nature
IUMS	International Union of Muslim Scholars
M7YAP	Muslim 7-Year Action Plan
MACCA	Muslim Association for Climate Change Action
MDGs	Millennium Development Goals
MENA	Middle East and North Africa
MEPA	Meteorological and Environmental Protection Administration
OECD	Organization for Economic Cooperation and Development
OIC	Organization of Islamic Cooperation (formerly Organization of the Islamic Conference)
PCR	Program to Combat Racism
PDC	Permaculture Design Course
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SDGs	Sustainable Development Goals
sqm	square meter
UN	United Nations
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
US\$	United States dollars
USA	United States of America
WB	World Bank
WCC	World Council of Churches
WEHAB	Water, Energy, Health, Agriculture, Biodiversity
WIN	Wisdom In Nature

WSSD

World Summit on Sustainable
Development

WWF

World Wildlife Fund

Synthesis

Sustainable living in today's world is not an easy goal. Humanity has to urgently address a vast array of sustainability-related problems, such as global warming, the risk of an energy supply crisis due to the uncontrolled extraction of natural resources (e.g., fossil fuel depletion), ecosystem degradation and pollution, biodiversity loss, nuclear risks, extreme weather events and natural disasters, overpopulation, overconsumption, and so on. The ecological crisis gripping the world has forced many Muslims to rethink the deep, co-constitutive relationship between humans and the non-human world as well as to reconsider the importance of their own moral-ethical values, virtues, duties, and responsibilities toward the entire planet.

Thus, the preliminary objective of this dissertation has been that of examining the main characteristics of Islamic and Muslim environmentalism.³ Accordingly, the preliminary concern of this thesis has been to understand the general phenomenon known as *Islamic environmentalism*, and, more specifically, the extent to which the endorsement of an Islamically-grounded ethical conception of ecological, economic and social development would inspire (or discourage), morally guide (or misguide) and motivate (or demotivate) individuals and social groups to respond to this increasingly alarming crisis and, consequently, to take sustainable action.

³ As stated by Schwencke, “‘Islamic environmentalism’ is here taken to refer to all theories and practices that draw inspiration from Islamic sources (Qur’an, Hadith, schools of law, philosophical traditions) and search for a specific ‘Islamic environmental ethics’. By contrast, ‘Muslim world environmentalism’ can be taken to indicate any form of environmental activism in the ‘Muslim world’ (which does not necessarily need to refer to Islam to substantiate environmental action)”. Anne Marieke Schwencke, *Globalized Eco-Islam: A Survey of Global Islamic Environmentalism*, 9. Final Report to Leiden University Fund pilot study (March 2011), Leiden Institute for Religious Studies (LIRS), Leiden University. Revised (draft): 23 February 2012, accessed February 10, 2016, <http://media.leidenuniv.nl/legacy/report-globalized-eco-islam-a-survey-schwencke-vs-24-february-2012-pdf.pdf>.

This religiously-oriented ethical model, which has in part inspired the movement that I have referred to as “eco-Islam”, claims to provide a set of normative tools, ethical rules and guidelines, social mechanisms and institutions that may help all Muslim believers tackle present-day sustainability challenges. The corresponding “eco-Islamic” worldview is, therefore, a holistic and comprehensive one. Basically, the Islamic environmental ethics draws on fundamental Quranic principles, as well as on Shariah-based (*Shari‘ah*-based) norms and precepts. Its traditional-orthodox approach to ecological and economic issues, which is mainly derived from the rigid interpretation of the classical Islamic sources (notably, the Quran and the Sunnah) is *theanthropocentric*, i.e., God- and human-centered. However, a certain number of contemporary Muslim/non-Muslim Islamic scholars and theologians have recently embraced reformist doctrines that are more in line with some *bio-centric/eco-centric* (i.e., nature-centered/ecosystem-centered) ethical approaches. As observed by Najma Mohamed, the eco-justice ethic of Islam aims at promoting “just, responsible and respectful interaction between humans and nature”.⁴

The activist side of the Islamic eco-theories is represented by the Islamic environmental movement, which mostly emerged at the end of the 1960s and in the early 70s. Since then, it has been influenced by different (sub-)currents of Islamic thought and practice (Sufi-mystical eco-philosophy and eco-spirituality; Islamic environmental law and governance; Islamic economics, finance, trade, and business; Islamic eco-anarchist thought; Islamic green activism and green lifestyles; Islamic “eco-halal” food, etc.).⁵ Throughout time, it has also assumed a

⁴ Najma Mohamed, “Revitalising an Eco-Justice Ethic of Islam by way of Environmental Education: Implications for Islamic Education” (PhD diss., Stellenbosch University, 2012), 49.

⁵ See Schwencke, *Globalized Eco-Islam*, 5.

more transnational character and has attracted different actors, from theologians, academic scholars, environmental policy-makers and financial/business elites to international (interfaith) platforms, civil society organisations, individuals, and Muslim communities living either in the West (mainly Europe, US and Canada), or in Muslim-majority countries (Indonesia, Malaysia, Turkey, Iran, Pakistan, etc.). Thus, it now covers different areas of public policy and interest, such as natural resource management (e.g., management of communal areas), ecosystem conservation and protection, animal welfare, environmentally sustainable lifestyles, and sustainable Islamic finance, economics, commerce, and trade.

Yet, in such a time of global ecological crisis, it is equally relevant to focus on *Muslim world environmentalism*. In the empirical part of this dissertation, I observe how Arab-Muslim civil societies have engaged themselves in numerous forms of individual and collective action for sustainability. For instance, a large number of non-religious (“secular”) and non-political social movements for sustainability have made their voices heard in the Arab public sphere, especially since the post-2011 phase. In the broadest sense, they can also be referred to as value-based social movements, i.e., value-oriented social movement organisations. They promote sustainability ideas through locally-based activities, which are aimed at realising, for example: (a) rural livelihood transformation through small-scale agroecological and permaculture projects; (b) urban sustainable planning and development (urban community gardens); and (c) nature conservation/protection initiatives (ecological reserves, wildlife protection). To better understand these new social movements, however, we need to go back to basic definitions. *Social movements* can be defined as “forms of collective action that emerge in response to situations of inequality, oppression

and/or unmet social, political, economic or cultural demands”.⁶ As noted by the India-based feminist activist and researcher Srilatha Batliwala, they consist of “an organised set of constituents pursuing a common political agenda of change through collective action”.⁷ Specifically, as stated by the scholar Anna C. Owen, the *sustainability movement* — whose precursor was the modern environmental movement developed in the late 1960s-early 1970s in the US and Western Europe — “is an umbrella movement” that arose as a global reaction against the environmental and socio-economic problems of our time (e.g., climate change, natural resource depletion, ecosystem degradation, urban overpopulation, extreme poverty). It comprises local food, green building, alternative energy, back-to-the-land living, eco-justice, permaculture movements, and so forth.⁸

The present thesis, it seems to me, adds to previous studies on theological eco-ethics as well as on sustainability movements in Muslim-majority countries, which were exclusively focused on faith-based Islamic environmental movements and organisations.⁹ The basic aim of this work, which may be counter-intuitive to the reader, is rather to investigate the motivational impact of the “greening of Islam”

⁶ Jessica Horn, “Engendering Social Movements: Evolution, Definitions, Debates and Resources,” in *Gender and Social Movements: Overview Report* (Brighton, UK: University of Sussex, BRIDGE, Institute of Development Studies, 2013), 19, accessed June 3, 2016, <http://docs.bridge.ids.ac.uk/vfile/upload/4/document/1401/FULL%20REPORT.pdf>.

⁷ Srilatha Batliwala, *Changing Their World: Concepts And Practices Of Women's Movements*. 2nd edn. (Toronto: Association for Women's Rights in Development, AWID, 2012), 3, accessed June 3, 2016, http://www.awid.org/sites/default/files/atoms/files/changing_their_world_2ed_full_eng.pdf. As cited in Horn, “Engendering Social Movements,” 19.

⁸ Anna C. Owen, “Industrial and Nutritional Hemp in Manitoba. A Case Study Exploring Stakeholder Strategies and Legitimacy” (MA thesis, Humboldt State University, 2012), 26–7, accessed May 4, 2016, http://humboldt-dspace.calstate.edu/bitstream/handle/2148/1036/AOwen_Final2.pdf?sequence=4.

⁹ See, for example, Yazlina M. Yazid, “Faith-Based Environmentalism: A Case Study of Islamic-Based Environmental Organisations in the United Kingdom” (MA thesis, Institute of Social Studies - ISS, Erasmus University, January 2008), 15–24, accessed March 4, 2015, <http://hdl.handle.net/2105/7121>.

movement on the selected secular sustainability movements that are currently active in two Arab-Muslim countries, namely Morocco and Tunisia. Since these new sustainability movements are generally composed of both Muslim and non-Muslim activists and participants, one of the purposes of this research is to provide a detailed account of the possible “eco-Islamic” motives for joining and engaging with these sustainability movements in Arab-Muslim contexts.

As we will see in the third section of the present thesis, the empirical study was accomplished by using a qualitative research approach and by utilising a frame/narrative analysis methodology (see Chapter 6). The case studies selected for this research are four overtly secular social movements for sustainability — that is, two permaculture movements and two eco-justice movements based in Morocco and Tunisia (both types of social movements are represented in each country). The main goal of the proposed qualitative ethnographic research, which is based on fifteen individual semi-structured interviews and on two focus-group interviews carried out between 2015 and 2016, is to analyse how the thought leaders and participants in these secular sustainability movements publicly frame their public discussions on sustainability issues. The research finds that the motivational framings employed by the selected respondents to provide moral-ethical reasons for their sustainability engagement efforts and actions encompass some “eco-Islamic” frames. In short, the empirical findings show that the various social movement actors make use of motivational framing strategies that draw on a wide range of Islamic spiritual resources, which, however, are more recurrent and explicit in the two Moroccan case studies. Still, I came to the general conclusion that their motivational frames are rarely attributable to Islamic supernatural beliefs and/or ecological worldviews. These new social movements act upon more syncretistic and pluralistic ecological-

economic cultures and practices. They mobilise themselves around core universal values (awe, reverence, love, compassion, care, respect), which are collectively shared and transmitted to future generations (e.g., to children). Their thought leaders and activists empower themselves and their respective communities by exploring and testing innovative and durable solutions either to resource-exploitative patterns of global economic growth, or to other national/regional developmental activities that are deemed as socially unjust, economically unfair or ecologically destructive. It therefore seems that their main concern is to engender local civic engagement as well as grassroots democratic deliberation and participation in their own sustainability projects and initiatives. In so doing, they actually seek to *locally* fabricate a lived alternative to the political-institutional, socio-economic and environmental status quo.

This dissertation has been divided into two parts, three sections and six chapters. It includes an introductory paragraph and a conclusion. The first part of this work (Part I - Section I) consists of the theoretical analysis of the relation between religion and ecology and between Islam and ecology, with specific reference to the global(ised) phenomenon referred to as the “greening of Islam” (Chapter 1). This theoretical study also offers an illustration of the basic tenets of the Islamic eco-ethical and eco-theological doctrine and attests the increasing relevance of so-called “eco-Islam” in the international public debates on sustainability and sustainable development (Chapter 2). The same chapter addresses the recent global-scale emergence of Muslim and Islamic “green” habits and lifestyles. Section II, which discusses the relation between religion, ecology, and economy of the commons, is structured in two chapters. Chapter 3 traces out the current academic debate on environmental commons and its governance models. Chapter 4 focuses on the possible application of the Islamic rules and commons

governance models for a sustainable access, use and management of the commons both in Muslim-majority countries and abroad. In the second part of the present thesis (Part II - Section III), particular attention is paid to the ecological and “commons struggles” experienced by social movements for sustainability in the Arab-Muslim world. Chapter 5 describes the various ways in which these contemporary sustainability movements have occupied central stage in the Arab world, especially since the post-revolutionary phase (i.e., since the 2011 Arab revolts). Further, it briefly presents the four case studies selected for the empirical study, which are overtly secular social movement organisations currently active in Morocco and Tunisia. The contribution of Chapter 6 consists of the in-depth, qualitative analysis of the four case studies presented in Chapter 5. Using frame/narrative analysis, the empirical study is mainly aimed at assessing the motivational influence of the “eco-Islamic” worldview on sustainability engagement and activism in Morocco and Tunisia. Chapters 5 and 6 constitute the bulk of my study.

Introduction

Recent decades have witnessed a surge in both academic and non-academic interest in the role of spirituality and religion in ecological consciousness and practice.¹⁰ On the one hand, some religious studies scholars have analysed the main characteristics of the so-called *earth or nature religions*, i.e., “nature-as-sacred religions, namely, religions that consider nature itself to be inherently sacred, not only worthy of respect or reverence because it was created by a divine being”.¹¹ In short, this theory contends that ecosystems and non-human organisms have intrinsic worth and moral standing independent from their usefulness for survival or for other human purposes. Non-human species are thus regarded as important as human species. More importantly, these nature-based spiritual traditions, cosmologies and value systems, which the American scholar Bron Taylor refers to as “dark green religions”,¹² cohere with the evolutionary-ecological worldview. They have animated a grassroots movement that is now becoming a globally organised social force. On the other hand, the representatives of clearly identifiable and (more or less) institutionalised religions, including monotheistic religions like Islam, have laid claim to having a long-standing ecological tradition that, in their view, deserves renewed attention. According to these ‘eco-religious’ advocates, religious principles, values, and beliefs — as Jean

¹⁰ See Jean Grondin, “To What Extent is the New Ecological Consciousness a Religious Phenomenon?” *Journal of Aesthetics and Phenomenology* 1, no. 1 (2014): 115, accessed June 2, 2015, <http://dx.doi.org/10.2752/20539339XX14005942183892>.

¹¹ For example, see Bron Taylor, “From the Ground Up: Dark Green Religion and the Environmental Future,” in *Ecology and the Environment: Perspectives from the Humanities*, ed. Donald K. Swearer (Cambridge, MA: Center for the Study of World Religions, Harvard University Press, 2008), 89 ff., accessed May 4, 2016, http://www.brontaylor.com/environmental_articles/pdf/Taylor--FromGroundUp.pdf.

¹² See Bron Taylor, “Gaian Earth Religion and the Modern God of Nature,” *Phi Kappa Phi Forum* 91, no. 2 (Summer 2011): 13–14, accessed September 7, 2015, http://www.brontaylor.com/environmental_articles/pdf/Taylor--GaiaModGod.pdf.

Grondin has observed — (a) do engender a sense of good and evil; and, most importantly, (b) foster the idea that harming nature and the environment is a human sin. Thus, faithful and wise people ought to be watchful in order not to commit such odious sins. Further, they argue that humans feel more motivated and compelled to save nature and the planet when a personal conversion to ecology takes place. By saving nature and the planet, indeed, people are also saving themselves.¹³ This is the ethical-theological background that explains the emergence of “eco-Islam”, i.e., a contemporary movement encouraging an ecological reinterpretation of Islam and of its teachings and traditions. Since the end of the 1960s, the “greening of Islam” has encouraged the parallel development of an Islamic environmental movement in some Muslim-majority countries as well as across Muslim communities located worldwide. The Islamic environmental movement presents itself as a heterogeneous movement, which, for the most part, is reformist and progressive in its social, economic, and political implications.

Within this variegated framework, however, I urge that attention be paid to the non-religious social movements for sustainability that are currently active in some Arab-Muslim countries. As I will elucidate in the following paragraph, these movements are the litmus test of whether Islamic eco-culture actually contributes to the development of more ecologically responsible societies and economies in predominantly Muslim contexts. Indeed, the main idea of this dissertation is to give a full picture of everything happening in terms of “eco-Islam”, and then see what elements thereof have an impact on secular sustainability movements.

¹³ Grondin, “To What Extent is the New Ecological Consciousness,” 115.

i. Research problem, objectives and research questions

The Islamic tradition, like all religious traditions, seeks to maintain the continuity of its message from one generation to another. Historically, the Islamic theological doctrine, when manipulated in order to achieve political aims (Muslim fundamentalism and Islamic radical thought), has prevented social change and cultural development in the Muslim world. In other cases, however, this doctrinal architecture may become an agent of positive social and cultural transformation. Given these preliminary assumptions, one of the fundamental aims of the present thesis is to understand to what extent the Islamic ethical-moral views on ecological and socio-economic issues may or may not have a significant motivational role to play in helping individuals and social groups mobilise and engage with the sustainability movements operating today in predominantly Muslim contexts. By focusing on the grassroots sustainability ideas and practices that have been supported and performed by overtly secular Arab sustainability movements, the objective of this research is to advance understanding of: (1) the moral-ethical motives that may have induced these new social movements and their respective members to mobilise and take sustainable action; (2) the specific aspects of so-called “eco-Islam” that might have provided moral courage and ethical inspiration to eco-activists and participants in such movements.

In pursuing this two-fold objective, the empirical study aims to uncover and explore the various ethical-moral motives of grassroots sustainability engagement and activism in Arab-Muslim countries, as they have been framed by the selected interviewees. A case study design methodology will be used to evaluate whether the global(ised) ‘greening of Islamic faith’ has encouraged and legitimised ecological activism and local democratic participation in Morocco and Tunisia.

On the whole, however, in this thesis I will try to provide an answer to an overarching research question: *what role does Islamic eco-culture (as expressed by so-called “eco-Islam”) play in contemporary Islamic and Muslim world?* In order to answer this general research question, it has been divided into three sub-questions, which have actually guided the entire research process. Each sub-question has been analysed in a separate section of this thesis. Section I, which discusses the religion-ecology nexus, intends to answer the following sub-question:

1) *How and to what extent would Islamic “theological eco-ethics” support a more environmentally sustainable way of life in predominantly Muslim contexts? (RQ1)*

Section II, which deals with the analysis of the relationship between religion, ecology and the “economy of the commons”, aims to examine the economic doctrine of Islam and, more specifically, to spell out what I have called the ‘Islamic commons’, i.e. the Islamic traditions of the commons.

2) *How and to what extent would Islamic “commons-economy” promote a more economically viable and socially sustainable management of natural/environmental resources, nature conservation and protection, and waste-pollution control in predominantly Muslim contexts? (RQ2)*

Section III, which constitutes the empirical section of this thesis, deals with the post-2011, value-based and overtly secular sustainability organisations based in Arab-Muslim countries (notably, in post-2011 Morocco and Tunisia). This empirical study applies a framing and narrative analysis methodology in order to answer a third sub-question:

3) *Has the “eco-Islamic” worldview provided ethical-moral motivation for sustainability engagement and action within*

the value-based and secular social movements operating in some Arab-Muslim countries? (RQ3)

During the research it turned out that this last research question gave rise to two additional sub-questions that will also need answering in order to obtain the full picture of the research question:

RQ3a: *How do the social movement actors engaged in the Moroccan and Tunisian social movements for sustainability interpret, respond to, and find motives to tackle sustainability problems?*

RQ3b: *How and to what extent is the “eco-Islamic” view stimulating new forms of self-governed collective engagement and action for sustainability in Morocco and Tunisia?*

In the three Sections, I will answer each of the three research questions in turn, while in the conclusion to the thesis I will address the main overarching Research Question. This will be discussed in the Section about the structure of the dissertation (Dissertation Outline).

ii. Literature review

The academic study of religion and ecology, which became prominent in the mid-1990s, was mainly initiated by the US-based debate raised by UCLA historian Lynn White Jr. (1907–1987).¹⁴ In his influential 1967 article “The Historical Roots of Our Ecologic Crisis”,¹⁵

¹⁴ However, there are other precursors to Lynn White’s thesis. For a review of the related literature, see for example Bron Taylor, “The Greening of Religion Hypothesis (Part One): From Lynn White, Jr. and claims that religions can promote environmentally destructive attitudes and behaviors to assertions they are becoming environmentally friendly,” post-copy edited version slated for publication in the *Journal for the Study of Religion, Nature and Culture* 10, no. 3 (2016a): n.p., accessed August 31, 2016, <https://florida.academia.edu/BronTaylor>. See also Bron Taylor, Gretel Van Wieren, and Bernard Zaleha, “The Greening of Religion Hypothesis (Part Two): Assessing the Data from Lynn White, Jr. To Pope Francis,” post-copy edited version slated for publication in the *Journal for the Study of Religion, Nature and Culture* 10, no. 3 (2016b): n.p., accessed August 31, 2016, <https://florida.academia.edu/BronTaylor>.

¹⁵ See Lynn White, Jr., “The Historical Roots of Our Ecologic Crisis,” *Science* 155, no. 3767 (10 March 1967): 1203 ff., accessed May 6, 2015, <http://www.jstor.org/stable/1720120>.

he mainly argued that the anthropocentric (*viz.* human-centred) and instrumentalist view of nature adopted by the Western world is related to the Judaeo-Christian religious cosmology. He also maintained that the Christian cosmological paradigm (1) has desacralised “nature”; (2) has alienated humans from “nature”; and, therefore, (3) has brought about the present ecological crisis.¹⁶ In response to White’s thesis, some Christian and Jewish theologians proposed alternative theories, *i.e.*, “ecological versions” of their biblical beliefs.¹⁷ As well, non-religious philosophers and environmental ethicists supported the establishment of a platform for the academic study of “religion and ecology”, which has developed over the last forty years into an interdisciplinary and constantly evolving research field.

As the Bucknell University Religious Studies Professors Mary Evelyn Tucker and John Grim discuss in a book chapter they have recently written on this topic,¹⁸ philosophers and historians have played a crucial role in the foundation of this discipline. For example, Clarence J. Glacken (1909–1989), internationally famous for his study on the role of nature in Western culture,¹⁹ and Arne Næss (1912–2009), the founding father of “deep ecology”, are recognised as illustrious authors

¹⁶ For more on this topic, see for example Arnold Toynbee, “The Religious Background of the Present Environmental Crisis: A Viewpoint,” *International Journal of Environmental Studies* 3 (1972): 141–46, accessed February 3, 2015, <http://dx.doi.org/10.1080/00207237208709505>. See also Aaron Horenstein, “The Relationship between Religious Attitudes and Concern for the Environment” (Master’s Thesis, Columbia University, 2012), accessed March 12, 2016, <http://static1.1.sqspcdn.com/static/f/1528810/23322800/1376593986833/Horenstein+Aaron.pdf?token=ugIQX2epD7NtafmKk2AMQjkRAwM%3D>.

¹⁷ See Mary Evelyn Tucker and John Grim, “Intellectual and Organizational Foundations of Religion and Ecology,” in *Grounding Religion: A Field Guide to the Study of Religion and Ecology*, eds. Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O’Brien (New York: Routledge, 2011), 85.

¹⁸ Tucker and Grim, “Intellectual and Organizational Foundations,” 82–5.

¹⁹ Tucker and Grim, “Intellectual and Organizational Foundations,” 84. See also Clarence J. Glacken, *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century* (Berkeley: University of California Press, 1967), 150–68.

in this field. Other important philosophers and environmental ethicists include J. Baird Callicott (b. 1941) and Holmes Rolston III (b. 1932).²⁰ Further, as explained by Tucker and Grim, the approaches of cultural anthropologists and ethnographers (Julian Steward, Roy A. Rappaport, Marvin Harris, and Gerardo Reichel-Dolmatoff) focus rather on the ritual and religious dimensions of traditional ecological livelihoods.²¹ According to their brief account of this new academic movement, another author worth mentioning is the Chinese-American geographer Yi-Fu Tuan (b. 1930).²² Tucker and Grim also make references to historians of ideas (William McNeill, Roderick Nash) and theologians interested in Christian eco-theology and environmentalism (John Cobb and Gordon Kaufman, for example).²³ They further allude to the

²⁰ See, for example, *Nature in Asian Traditions of Thought: Essays in Environmental Philosophy*, eds. J. Baird Callicott and Roger T. Ames (Albany, NY: SUNY Press, 1989), 1–21; and Holmes Rolston III, *Philosophy Gone Wild: Essays in Environmental Ethics* (Amherst, NY: Prometheus Books, 1986), 12–29, and 53–60.

²¹ Tucker and Grim, “Intellectual and Organizational Foundations,” 84. On the concept of “cultural ecology”, see Julian H. Steward, *Theory of Culture Change: The Methodology of Multilinear Evolution* (Urbana, IL: University of Illinois Press, 1955), 173–77; Roy A. Rappaport, *Ecology, Meaning, and Religion* (Richmond, CA: North Atlantic Books, 1979), 43–95; Marvin Harris, “The Cultural Ecology of India’s Sacred Cattle,” *Current Anthropology* 7, no. 1 (February 1966): 51–9; Gerardo Reichel-Dolmatoff, “Cosmology as Ecological Analysis: A View from the Rainforest,” *Man* 11, Issue 3 (September 1976): 307–8, accessed September 5, 2016, <http://www.jstor.org/stable/2800273>.

²² Tucker and Grim, “Intellectual and Organizational Foundations,” 84. On the ultimate placelessness and universality of religious ecological experiences, see for example Yi-Fu Tuan, *Topophilia: A Study of Environmental Perceptions, Attitudes, and Values* (Englewood Cliffs, New Jersey: Prentice-Hall, 1974), 93 ff.; and idem, *Space and Place: The Perspective of Experience* (Minneapolis: University of Minnesota Press, 1977); *Morality and Imagination: Paradoxes of Progress* (Madison, WI: University of Wisconsin Press, 1989), 3–10; *Religion: From Place to Placelessness*, photographs and essays by Martha A. Strawn (Chicago, IL: Center for American Places at Columbia College. Distributed by the University of Chicago Press, 2010).

²³ Tucker and Grim, “Intellectual and Organizational Foundations,” 84. See, for example, William H. McNeill, *Plagues and Peoples* (New York: Anchor Books, 1976); Roderick F. Nash, *Wilderness and the American Mind* (Connecticut: Yale University Press, 1967); and G. Kaufman, ed., *Theology for a Nuclear Age* (Manchester, UK; Manchester University Press, 1985).

academic contributions made by eco-feminists²⁴ and engaged writers concerned with eco-justice issues (Robert Bullard and Dieter Hessel).²⁵

While Roger Gottlieb, Professor of philosophy at the Worcester Polytechnic Institute, is described as a prolific author in the field of eco-theology,²⁶ the American Professor Bron Taylor²⁷ deserves special mention among the academic scholars who have explored eco-spiritual movements and “nature religions”.²⁸ Editor of the two-volume *The Encyclopedia of Religion and Nature* (2005) and founder of the Society for the Study of Religion, Nature and Culture, Taylor coined the term “dark green religion” to identify spiritual practices that hold nature as sacred and intrinsically valuable. It is worth recalling his *Journal for the Study of Religion, Nature, and Culture*, and Brill’s specialised journal *Worldviews: Global Religions, Culture, and Ecology*.²⁹

²⁴ Tucker and Grim, “Intellectual and Organizational Foundations,” 85. On ecofeminism, see for example Rosemary R. Ruether, *Gaia and God: An Ecofeminist Theology of Earth Healing* (New York: Harper Collins, 1992); Sally McFague, *The Body of God: An Ecological Theology* (Minneapolis, MN: Fortress, 1993); Heather Eaton, *Introducing Ecofeminist Theologies* (London: T & T Clark, 2005).

²⁵ Tucker and Grim, “Intellectual and Organizational Foundations,” 85. See also Robert D. Bullard, *Dumping in Dixie: Race, Class, and Environmental Quality* (Boulder, CO: Westview Press, 1990), and Dieter T. Hessel, ed., *After Nature’s Revolt: Eco-Justice and Theology* (Minneapolis: Fortress Press, 1992).

²⁶ Tucker and Grim, “Intellectual and Organizational Foundations,” 85. See for example Roger S. Gottlieb, *A Greener Faith: Religious Environmentalism and Our Planet’s Future* (New York, NY: Oxford University Press, 2006a); Roger S. Gottlieb, ed., *The Oxford Handbook of Religion and Ecology* (New York, NY: Oxford University Press, 2006b), and idem, *Engaging Voices: Tales of Morality and Meaning in an Age of Global Warming* (Waco: Baylor University Press, 2011); *Spirituality: What It Is and Why It Matters* (New York, NY: Oxford University Press, 2012).

²⁷ See Bron Taylor, *Dark Green Religion: Nature Spirituality and the Planetary Future* (Berkeley, CA: University of California Press, 2009a); and idem, “From the Ground Up,” 89 ff.; see also Bron Taylor and Jeffrey Kaplan, eds., *The Encyclopedia of Religion and Nature*, Vol. 1 and 2 (London and New York: Thoemmes Continuum, 2005).

²⁸ Tucker and Grim, “Intellectual and Organizational Foundations,” 85. See, for example, Catherine L. Albanese, *Nature Religion in America: From the Algonkian Indians to the New Age* (Chicago: University of Chicago Press, 1991), and Graham Harvey, *Contemporary Paganism: Listening People, Speaking Earth* (New York: New York University Press, 1997).

²⁹ See <http://www.brill.com/worldviews-global-religions-culture-and-ecology>. Among non-theist pioneering theories, it is worth mentioning Lovelock’s “Gaia

The academic institutional environment produced by the “religion and ecology” platform has flourished since the 1990s. In 1990, Steven Rockefeller (b. 1936) convened a successful conference on “Spirit and Nature” at Vermont’s Middlebury College. In the following years, a similarly-titled American Public Television broadcast, a widely distributed video,³⁰ and a book were published (Rockefeller and Elder 1992). Rockefeller’s work and his leading role in drafting the *Earth Charter* prompted historians of religions, theologians and environmentalist to collaborate with the Harvard Divinity School (Center for the Study of World Religions – CSWR). The School organised a comprehensive series of conferences (“Religions of the World and Ecology”) and several publications dealing with the relationship between ecology and the world’s religious traditions (Western, Asian and indigenous religions), with specific regard to their scriptural traditions, rituals and ethical models. The three-year conference series, which occurred between 1996 and 1998, led to the publication of the Harvard University Press book series, edited by Mary Evelyn Tucker and John Grim (Tucker and Grim 1997–2004). Inspired and trained by Thomas Berry (1914–2009)³¹ — who directed the Riverdale Center of Religious Research along the Hudson River and

hypothesis”. In 1979 James Lovelock (b. 1919), a British scientist and inventor, published his famous book *Gaia: A New Look at Life on Earth*. Truly, his cosmological framework (in which he describes the Earth as a single living entity, and a self-regulating, complex system) certainly resonates with some “Earth-goddess” visions, which have distanced themselves from mainstream religious traditions. See James Lovelock, *Gaia: A New Look at Life on Earth* (New York: Oxford University Press, 1979).

³⁰ “Spirit & Nature,” Moyers & Company, June 5, 1991, accessed August 31, 2016, <http://billmoyers.com/content/spirit-nature/>.

³¹ Thomas Berry (1914–2009) and Brian Swimme (b. 1950) were inspired by the cosmological-evolutionary perspective of the French Jesuit theologian and palaeontologist Teilhard de Chardin (1881–1955). On this point, see, for example, Bron Taylor, “A Green Future for Religion?” *Futures* 36 (2004): 999, accessed September 3, 2016, http://www.brontaylor.com/environmental_articles/pdf/Taylor--GreenFuture4Rel.pdf.

established a comprehensive History of Religions Program at Fordham University — Tucker and Grim have made important contributions as historians of religion to the “religion and ecology” academic platform. The latter has the merit, among others, of having co-opted many Muslim intellectuals and eco-activists.³² After the culminating conference held at the United Nations and the American Museum of Natural History (1998), they co-founded the Forum on Religion and Ecology, an international multi-religious Yale-based project, and they created an international website (<http://fore.yale.edu/>).

Along with divinity schools and seminaries in the US, colleges and universities offer courses, curricula, as well as undergraduate/graduate programmes on environmental studies and religion and ecology studies.³³ The Religion and Ecology Group of the American Academy of Religion (AAR) has been institutionally active on this front since its creation in 1993, thanks to the initial efforts of David Barnhill (then Professor of Buddhism and Environmental Studies at Guilford College) and Eugene Bianchi (then Professor of Christian Theology and specialist in Roman Catholicism at Emory University).³⁴ In Europe, Sigurd Bergmann has initiated and chaired the executive committee for the European Forum for the Study of Religion and the Environment since 2005. Its Canadian counterpart is the Canadian Forum on Religion and Ecology. Furthermore, the religion-ecology nexus has been explored by non-religious scholars who are mainly interested in faith-based or inter-faith environmental groups.³⁵ Other

³² See, for example, Mary Evelyn Tucker, *Worldly Wonder: Religions Enter Their Ecological Phase* (Chicago, IL: Open Court Publishing Company, 2003); Max Oelschlaeger, *The Idea of Wilderness: From Prehistory to the Age of Ecology* (New Haven: Yale University Press, 1991); and Ursula W. Goodenough, *The Sacred Depths of Nature* (Oxford-New York: Oxford University Press, 1998).

³³ See Tucker and Grim, “Intellectual and Organizational Foundations,” 89.

³⁴ See Taylor, “The Greening of Religion Hypothesis (Part One),” n.p.

³⁵ See, for example, Paul C. Stern et al., “A Value-Belief-Norm Theory of Support for Social Movements: The Case of Environmentalism,” *Human Ecology Review* 6, no. 2

religious scholars have worked from within their own theological traditions with the aim of advocating particular research approaches and tendencies. Clear examples of this trend are the works of Christian process theologians³⁶ and ethicists,³⁷ as well as of engaged Buddhist scholars.³⁸

It is within this scholarly framework that the Iranian-born intellectual Seyyed Hossein Nasr (now University Professor of Islamic Studies at George Washington University) published seminal books, which provided foundations for contemporary “eco-Islamic” thought and activism. He was one of the first Muslim scholars to call for returning to an “authentic religion”. His masterpiece on this topic is *Man and Nature: The Spiritual Crisis in Modern Man* (1968). It is only

(1999), 81–97, accessed May 7, 2016, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.195.5410&rep=rep1&type=pdf>; Darren E. Sherkat and Cristopher G. Ellison, “Structuring the Religion-Environment Connection: Identifying Religious Influences on Environmental Concern and Activism,” *Journal for the Scientific Study of Religion* 46, no. 1 (2007): 71–85, doi 10.1111/j.1468-5906.2007.00341.x; Paul A. Djupe and Patrick K. Hunt, “Beyond the Lynn White Thesis: Congregational Effects on Environmental Concern,” *Journal for the Scientific Study of Religion* 48, no. 4 (2009): 670–86; Willis Jenkins and Christopher Key Chapple, “Religion and Environment,” *Annual Review of Environment and Resources* 36 (2011): 441–63, DOI: 10.1146/annurev-environ-042610-103728.

³⁶ See, for example, John B. Cobb, “Christian Existence in a World of Limits,” *Environmental Ethics* 1, Issue 2 (Summer 1979): 149–158, DOI: 10.5840/enviroethics19791219; Jay B. McDaniel, *Earth, Sky, Gods and Mortals: Developing an Ecological Spirituality* (Mystic, Conn.: Twenty-Third Publications, 1990); and David R. Keller, ed., *Environmental Ethics: The Big Questions* (New Jersey: Wiley-Blackwell, 2010).

³⁷ See Larry L. Rasmussen, *Earth Community, Earth Ethics* (Maryknoll, NY: Orbis Books, 1996); J. Ronald Engel and Joan Gibb Engel, eds., *Ethics of Environment and Development: Global Challenge, International Response*, (Tucson, AZ: University of Arizona Press, 1990).

³⁸ See Ernest Friedrich Schumacher, “Buddhist Economics,” in *Asia: A Handbook*, ed. Guy Wint (New York: Praeger: 1966), 695–701; Gary Snyder, *Earth House Hold* (New York: New Directions Books, 1969); Joanna Rogers Macy, “Dependent Co-arising: The Distinctiveness of Buddhist Ethics,” *Journal of Religious Ethics* 7, no. 1 (Spring 1979): 38–52, accessed June 7, 2016, <http://www.jstor.org/stable/40018242>; Kenneth Kraft, ed., *Inner Peace, World Peace: Essays on Buddhism and Nonviolence* (Albany, New York: State University of New York Press, 1992); and Stephanie Kaza, “To Save All Beings: Buddhist Environmental Activism,” in *Engaged Buddhism in the West*, ed. Christopher S. Queen (Boston: Wisdom Publications, 2000), 159–83.

in the late 1970s-early 1980s, however, that an increasing number of committed scholars started to systematically analyse the relationship between Islam and ecology. Two well-known pioneers in this field are Ziauddin Sardar and S. Parvez Manzoor, who mostly adopted an “Islamic science” perspective. The current scholarly literature on Islamic eco-ethical approaches and practices includes the in-depth explorations made by leading Muslim scholars and eco-activists in the field.³⁹ Their contributions also appeared in the book *Islam and Ecology: A Bestowed Trust*, which was published in 2003. Nawal Ammar is another Islamic anthropologist and philosopher who has derived Islamic environmental ethics from a coherent set of theological principles.⁴⁰ In 1994 Fazlun Khalid, one of the most famous contemporary Islamic eco-activists, founded the Islamic Foundation for Ecology and Environmental Sciences (IFEES) in Birmingham, UK. He has worked with *Greenpeace* and *Friends of the Earth* and he has often collaborated both with the British Green Party and with the dense network of environmental groups and local UK-based Muslim communities. Since then, IFEES has launched global campaigns for raising ecological awareness and responsibility among Muslims. In 2008, Khalid promoted the *Muslim Green Guide to Reducing Climate*

³⁹ See, for example, Fazlun M. Khalid, ed., *Qur'an: Creation and Conservation. An Introduction to the Ethical Foundations of Islamic Environmentalism* (Birmingham, UK: Islamic Foundation for Ecology and Environmental Sciences – IFEES, 1999), accessed January 20, 2015, <http://www.ifees.org.uk/wp-content/uploads/2015/04/1380144345.pdf>; and idem, “Islam and the Environment,” in *Encyclopedia of Global Environmental Change*, edited by Ted Munn and Peter Timmerman (Chichester, UK: John Wiley and Sons Ltd., 2002), 332–39, accessed February 11, 2014, <http://www.ifees.org/islamenviroment.pdf>; “Islam and the Environment - Ethics and Practice. An Assessment” (Paper presented at the 15th General Conference on The Environment in Islam, Amman, the Hashemite Kingdom of Jordan, September 27th–29th, 2010), accessed May 3, 2015, <http://www.ifees.org.uk/wp-content/uploads/2015/04/1379669287.pdf>.

⁴⁰ See Nawal H. Ammar, “Restorative Justice in Islam: Theory and Practice,” in *The Spiritual Roots of Restorative Justice*, ed. Michael L. Hadley (Albany, NY: State University of New York Press, 2001), 169–73.

Change (<http://fathi.co.uk/booklet.pdf>), a booklet jointly published by IFEES, the charity/NGO *Muslim Hands* and *UK Lifemakers Foundation*. Yet, little research has been conducted on Khalid's ideas, works and activist networks. Further, the authors (e.g., religious scholars and academic figures) who took part in the 1992 and 2003 *Islam and Ecology* series (Fazlun Khalid, Umar Vadillo, Hashim Ismail Dockrat, and Yasin Dutton) worked out and discussed their eco-Islamist theories and discourses. They proposed a radical political project that challenges modern capitalism and its political, economic-financial and social systems.⁴¹ Inspired by the controversial *Murabitun* (*al-Murābiṭūn*) movement, the political, economic-financial and environmental governance models proposed by these eco-Islamists seems to include the reintroduction of *Sharī'a*-based concepts and institutions (the Islamic traditional regulative and monitoring institutions, such as *hisbah* (*ḥisbah*) and *muhtasib* (*muḥtasib*), for example) and the re-establishment of the Islamic Caliphate along with the foundation of a parallel Islamic monetary system based on the Gold Dinar.

Within this broad yet highly specialised literature, the analysis of the Muslim civil society's "green" groups, organisations and circles, which were also engaged in the UN Climate Change Summits (Bali in 2007, Istanbul in 2009 and Bogor in 2010) is essential to a better understanding of so-called "eco-Islam". This movement is extremely heterogeneous and, in some cases, focused on the socio-economic

⁴¹ See, for example, Umar Vadillo, *The End of Economics: An Islamic Critique of Economics* (Granada: Madinah Press, 1991); Yasin Dutton, "Islam and the Environment: A Framework for Inquiry," *Faiths and the Environment: Conference Papers*, 46–70. *Faith in Dialogue*, no. 1, London: Centre for Inter-Faith Dialogue, 1996; and Hashim Ismail Dockrat, "Islam, Muslim Society, and Environmental Concerns: A Development Model Based on Islam's Organic Society," in *Islam and Ecology: A Bestowed Trust*, eds. Richard C. Foltz, Frederick M. Denny, and Azizan Baharuddin (Cambridge, Mass.: Harvard Divinity School, Center for the Study of World Religions, 2003; Distributed by Harvard University Press, 2003), 341–75.

dimensions of the ecological crisis.⁴² In 2002 the Muslim global civil society produced the *First Muslim Convention on Sustainable Development* (Muslim Summit), which was promoted by the South African Awqaf Foundation.⁴³ Both the intellectuals and the academic/non-academic representatives of “eco-Islam” have been criticised by Richard Foltz.⁴⁴ Co-editor with Frederick Denny of the *Islam and Ecology* volume,⁴⁵ Foltz is a historian of comparative religious traditions and the founding director of the Concordia’s Centre for Iranian Studies Programme. Editor of the entry “Islam” in the *International Society for the Study of Religion, Nature, and Culture’s* (ISSRNC) *Encyclopaedia of Religion and Nature* (Foltz 2005b) and in *The Oxford Handbook of Religion and Ecology* (Gottlieb 2006b), he has recently published a pioneering book entitled *Environmentalism in the Muslim World* (Nova Science Publishers, 2005).⁴⁶

Furthermore, as the reader will see in the pages that follow, a consistent part of this thesis (Part III) is dedicated to empirically investigating the ethical-moral motives that may drive individuals and social groups to engage in and take action through sustainability movements, such as those that are currently operating in some Arab-

⁴² See, for example, Abubakr Ahmed Bagader et al., “Environmental Protection in Islam,” *IUCN Environmental Policy and Law Paper* 20, 2nd revised edn., IUCN-MEPA (Gland, Switzerland-Cambridge, UK: IUCN, 1994), accessed May 6, 2016, http://cmsdata.iucn.org/downloads/eplp_020reven.pdf; Muhammad Ramzan Akhtar, “Towards an Islamic Approach for Environmental Balance,” *Islamic Economic Studies* 3, no. 2 (1996): 57 ff., accessed May 3, 2015, <http://www.irti.org/English/Research/Documents/IES/137.pdf>; Munawar Iqbal, ed., *Islamic Perspectives on Sustainable Development* (Basingstoke, UK: Palgrave Macmillan, 2005).

⁴³ See Schwencke, *Globalized Eco-Islam*, 39.

⁴⁴ See Richard C. Foltz, “Is There An Islamic Environmentalism?” *Environmental Ethics* 22, n. 4 (2000): 63 ff.

⁴⁵ See Richard C. Foltz, Frederick Mathewson Denny, and Azizan Haji Baharuddin, eds., *Islam and Ecology: A Bestowed Trust* (Cambridge, Mass.: Center for the Study of World Religions, Harvard Divinity School; Distributed by Harvard University Press, 2003).

⁴⁶ See Schwencke, *Globalized Eco-Islam*, 19–20.

Muslim countries. The social movement literature dealing with collective action for sustainability in the Arab-Muslim world is scarce because the phenomenon is relatively recent (post-revolutionary) and geographically heterogeneous.⁴⁷ However, there is an abundant academic literature on post-war Western environmental (and environmental justice) activism. Two books from the 1960s have marked the history of the North American environmental movement: *Silent Spring* by Rachel Carson (1962) and *The Death and Life of Great American Cities* by Jane Jacobs (1961). Thus, we cannot understand the contemporary sustainability movement without first looking into the studies conducted on the modern environmental movement.⁴⁸ The latter came into existence in the 1950s and 1960s in the US and Western Europe. In that period, sustainability research was incorporated into the traditions of environmental studies. In the meantime, since the late 1960s scholars of sociology and political science have developed different social movement theories (resource mobilisation theory; political opportunity structure theory; organisational theory; charismatic leadership theory; and new social movement theory). The social movements literature on the New Social Movements (NSMs) gained renewed momentum in Europe and Latin America in the 1980s-

⁴⁷ See, for example, Mohamed Abdel Raouf, "Middle East Revolutions: An Environmental Perspective," *The Environment and the Middle East, Regional and International Cooperation* 3, Middle East Institute Viewpoints (June 2011): 27 ff., accessed May 5, 2015, <https://www.files.ethz.ch/isn/130332/EnvironmentVPVol3.pdf>; Joel Beinin and Frédéric Vairel, eds., *Social Movements, Mobilization, and Contestation in the Middle East and North Africa* (Stanford, CA: Stanford University Press, 2011), 1–23; Jeannie L. Sowers, *Environmental Politics in Egypt: Activists, Experts and the State*, Routledge Series in Middle Eastern Politics (New York: Routledge, 2013; paperback 2014), 154–78.

⁴⁸ In the twenty-first century, the birth of a North American "post-environmental" movement was evoked by Michael Shellenberger and Ted Nordhaus in a controversial essay published in 2004. See Michael Shellenberger and Ted Nordhaus, *The Death of Environmentalism. Global Warming Politics in a Post-Environmental World* (Oakland, CA: The Breakthrough Institute, 2004), accessed April 8, 2015, http://www.thebreakthrough.org/images/Death_of_Environmentalism.pdf.

90s and developed in parallel to the rise of the social constructionist approach in the US. Those new theories of social change and collective action were oriented toward a cultural and social approach to the study of social movements' formation and mobilisation processes. The new social movement research was elaborated by many theorists such as Alain Touraine and Alberto Melucci, and more recently, by Donatella della Porta and Mario Diani.⁴⁹ Today's grassroots sustainability movements, which appear to be small, community-based, decentralised and self-determining movements, can be regarded as new social movements. According to some scholars, cultural aspects (e.g., symbols, codes, collective identities, narratives, frames, discourses, ideologies) may both influence and be the target of social mobilisation and action.⁵⁰ For this reason, studies of narratives, stories, and story-

⁴⁹ See, for example, Russell J. Dalton and Manfred Kuechler, eds., *Challenging the Political Order: New Social and Political Movements in Western Democracies* (New York: Oxford University Press, 1990); Klaus Eder, *The New Politics of Class: Social Movements and Cultural Dynamics in Advanced Societies* (New York: SAGE, 1993); Alberto Melucci, "The Symbolic Challenge of Contemporary Movements," *Social Research* 52, no. 4 (1985): 789 ff.; and idem, *Nomads of the Present* (London: Hutchinson Radius, 1989); *Challenging Codes: Collective Action in the Information Age* (Cambridge: Cambridge University Press, 1996). See also Claus Offe, "New Social Movements: Challenging the Boundaries of Institutional Politics," *Social Research: An International Quarterly* 52, no. 4 (1985): 817–68; Alain Touraine, *La Voix et le Regard* (Paris: Seuil, 1978), 104–32; and idem "Les mouvements sociaux: objet particulier ou problème central de l'analyse sociologique?" *Revue Française de Sociologie* XXV (1984): 3–4. For overviews, see Steven M. Buechler, "New Social Movement Theories," *Sociological Quarterly* 36, no. 3 (Summer 1995): 441–64, accessed May 7, 2015, <http://www.jstor.org/stable/4120774>; Nelson A. Pichardo, "New Social Movements: A Critical Review," *Annual Review of Sociology* 23 (August 1997): 411–30, accessed May 8, 2016, <http://www.jstor.org/stable/2952558>. See also Donatella Della Porta and Mario Diani, *Social Movements: An Introduction* (Malden, MA: Blackwell Publishing, 1999; 2nd edn., 2006).

⁵⁰ See, for example, Hank Johnston and Bert Klandermans, eds., *Social Movements and Culture* (London: Routledge, 1995); Jeff Goodwin and James M. Jasper, eds., *Rethinking Social Movements: Structure, Culture, and Emotion* (Lanham, MD: Rowman & Littlefield Publishers, 2004); and idem, *The Social Movements Reader: Cases and Concepts*, 3rd edition (New York: Wiley Blackwell, 2015).

telling in social movements have deeply informed the empirical research for this thesis.⁵¹

iii. Relevance of the study

This study offers multiple normative perspectives regarding the moral boundaries and ethical conditions for a sustainable present (and future). As making sense of sustainability compels political societies to decide on what sustains humanity and what must be sustained over time, sustainability has a lot to do with public deliberative practices and democratic development. Moreover, thinking through the topic of religion and ecology/sustainability invites the academic community not only to investigate the connection between socio-economic problems, human moral decadence, and ecological degradation but also to give an account of whether and to what extent the ecological ideas generated by religious traditions may (or may not) reorient political and socio-economic life in predominantly Muslim contexts. For example, whenever what I would call ‘moral communities’ rediscover their own spiritual traditions and use religious resources in order to respond to sustainability problems, they implicitly admit that religion is actively contributing to the reproduction of sustainable environmental and human relations. However, religions might also put restraints on social and political mobilisation for sustainability because of their conservatism. Therefore, a complete mapping out of the role eco-Islam might play in shaping social action for sustainability in Muslim-

⁵¹ See Robert D. Benford and David A. Snow, “Framing Processes and Social Movements: An Overview and Assessment,” *Annual Review of Sociology* 26 (2000): 611–39, accessed May 9, 2015, DOI 10.1146/annurev.soc.26.1.611. See also Francesca Polletta, “Contending Stories: Narrative in Social Movements,” *Qualitative Sociology* 21, Issue 4 (December 1998): 419–46, accessed June 7, 2015, DOI 10.1023/A:1023332410633; Joseph E. Davis, “Narrative and Social Movements,” in *Stories of Change: Narrative and Social Movements*, ed. Joseph E. David (Albany, NY: SUNY Press, 2002); and, more recently, Lucas F. Johnston, *Religion and Sustainability: Social Movements and the Politics of the Environment* (Sheffield, UK: Equinox Publishing Ltd., 2013).

majority countries is potentially relevant to (1) sustainability policy-making because it might help governments, policy-makers, activists and social theorists (re-)frame sustainability policies and programmes in Muslim-majority countries after having taken into account the basic interrelationship between social goals, ecological functioning and the cultural force of religious traditions; (2) religious studies scholars and other experts in the field of religion and ecology who are interested in bringing to the surface the vital force of ‘eco-Islamic logic’ as one of the possible motives behind social movements’ ecological activism in Muslim-majority countries; (3) social movements theorists who are committed to examining the collective popular responses to the current ecological crisis in Arab-Muslim countries, where sustainability problems are often ignored at the political-institutional level.

iv. Methodological outline

This research project consists of two core studies: the theoretical study (see Part I, Sections I and II), which chiefly aimed at responding to Research Questions 1 and 2 (RQ1 and RQ2), and the empirical study (see Part II, Section III), which was conducted to respond to Research Question 3 (RQ3) (including its two sub-questions RQ3a and RQ3b, as we will see in Chapter 6). In order to achieve these research objectives, a multi-method approach for qualitative data collection and analysis was adopted.

In the first research phase (see Part I, Section I, Chapters 1 and 2), various types of qualitative data were gathered on the macro-phenomenon that I have referred to as “eco-Islam”. Preliminary answers to the first research question were obtained through the analysis of recent academic publications about this emerging and relatively recent topic of study (see Literature review), as well as through the consultation of written (mostly digital) documents and online reports issued by international environmental/climate research

bodies, environmental organisations, and environmental agencies (e.g., official online reports published by the African Development Bank; UNDP and UNEP Reports; Conservation International Annual Reports; IPCC Working Group I-II Assessment Reports; the Arab Forum for Environment and Development – AFED Annual Reports). In addition, online documents and leaflets published by international ENGOs such as Greenpeace and World Wildlife Fund (WWF) were read and used. Additionally, web documents from “ecologically-sensitive” faith- and interfaith organisations and institutions like Alliance of Religions and Conservation (ARC), the Islamic Educational, Scientific and Cultural Organization (ISESCO), The International Union for Conservation of Nature (IUCN), and the Islamic Educational, Scientific and Cultural Organization were consulted and analysed. Investigating further, a wide number of websites and blogs on both Islamic and Muslim environmentalism were found and monitored. For example, the English website pages and newsletters issued by contemporary “eco-religious” web fora/communities and/or organisations (e.g., Eden Keeper, Islamic Foundation for Ecology and Environmental Sciences – IFEES, Wisdom In Nature – WIN, DC Green Muslim, Green Prophet.com, A World of Green Muslims, The Eco-Muslim) were extensively read and quoted.

In the second research phase (see Part I, Section II), qualitative data collection and analysis methods were used in order to get more insights into the relationship between (1) religious (notably, Islamic) morality-ethics; (2) ecological thought; and (3) the economic aspects of sustainable (communal) resource management. A consistent number of scholarly publications in the field of environmental/climate economics, ethics, and philosophy were accessed and analysed (see Chapter 3). Further, in order to enquire into the traditional Islamic communal resources management systems (see Chapter 4), recent academic papers and books published by contemporary Islamic scholars in the field of

Islamic economics, ecology and social studies were read, sorted and analysed. Specialised online reports and documents released by Islamic charitable organisations (e.g., Islamic Relief Worldwide – IRW), Islam-based environmental organisations, as well as by Islamic international scientific institutions concerned, for example, with nature conservation and other sustainable development issues (e.g., Islamic Educational, Scientific and Cultural Organization – ISESCO, International Union for Conservation of Nature – IUCN) were also used for collecting and giving relevant information.

In the third and last research phase (see Part II, Section III), written (mostly digital) academic papers and conference proceedings related to contemporary social movements literature were read and thoroughly studied (see Literature review). Additional academic journal articles and books dealing with the grassroots sustainability organisations currently based in Arab-Muslim countries were also accessed and analysed. Further, important data were obtained through the collection and analysis of both quantitative surveys and qualitative research studies in the field of behavioural economics and environmental/social psychology. The final phase of the present research was chiefly focused on conducting the empirical analysis of four case studies (see Chapter 6). This specific research goal required a comprehensive and interpretive (hermeneutic) methodology which could help illuminate the action mobilisation processes lying behind the (secular) social movements for sustainability operating in the two selected Arab countries (Morocco and Tunisia).⁵² The qualitative in-depth empirical study used frame analysis and narrative analysis

⁵² See, for example, David A. Snow and Scott C. Byrd, “Ideology, Framing Processes, and Islamic Terrorist Movements,” *Mobilization: An International Quarterly* 12 (2007): 119–36, accessed June 12, 2015, <https://webfiles.uci.edu/sbyrd/home/terroristmovements.snow.byrd.2007.pdf>.

approaches and methods for the collection and analysis of qualitative data about social movements and collective action processes. Specifically, this empirical study was an attempt to investigate: (1) how the participants of the selected social movements had framed their arguments regarding sustainability; and, more specifically, (2) what was the moral-ethical content of the issue frames and narratives employed by social movement leaders and activists (or participants) in their ‘mission’ to mobilise themselves and other people to take action for sustainability.

According to the existing social movement literature that makes extensive use of frames to understand collective action phenomena (see Literature review), *frames* can be defined as “mental schemes” or “interpretive schemata” people use: (a1) to perceive and interpret the world (i.e., the situational context) and themselves; (a2) to select the most salient aspects of their surrounding reality; (b) to turn their own vision of reality into individual as well as collective action.⁵³ *Framing*, as Sarah Jayne Bradbury tells us by citing Barbara Gray,⁵⁴ “is the

⁵³ “Frames are...‘schemata of interpretation’ that enable individuals to locate, perceive, identify and label occurrences within their life space and the world at large. By rendering events or occurrences meaningful, frames function to organize experience and guide action, whether individual or collective”. See Snow et al., “Frame Alignment Processes, Micromobilization and Movement Participation,” *American Sociological Review* 51 (1986): 464, accessed February 6, 2015, <http://www.jstor.org/stable/2095581>. As cited in Marie Mika, “Framing the Issue: Religion, Secular Ethics and the Case of Animal Rights Mobilization,” *Social Forces*, no. 2 (December 2006): 919, accessed March 7, 2015, <http://www.jstor.org/stable/4494944>. For a detailed review of the literature on frame analysis, see Sarah Jayne Bradbury, “The Role of Grassroots Sustainability Associations in Framing Sustainability Issues to Mobilise Communities for Social Change” (PhD diss., University of Leeds, June 2015), 13–6. See also Lasse Lindekilde, “Discourse and Frame Analysis,” in *Methodological Practices in Social Movement Research*, ed. Donatella Della Porta (Oxford, UK: Oxford University Press, 2015), 199 ff.; on the concept of “frame”, see for example Erving Goffman, *Frame Analysis: An Essay on the Organization of Experience* (New York: Harper & Row, 1974).

⁵⁴ Barbara Gray, “Framing Environmental Disputes,” in *Making Sense of Intractable Environmental Conflicts*, eds. R. J. Lewicki and M. Elliot (Washington, D.C.: Island

activity and process of creating and representing frames”; further, it is “an active process that requires agency”.⁵⁵ Hence, “a frame is the outcome of the framing process”. The resulting study of the “core framing tasks” (*diagnostic, prognostic, motivational*) pursued by these social movements, and especially the analysis of their own motivational framing techniques, is mostly aimed at analysing the (either covert or overt) deployment of the Islamic eco-ethical and eco-theological values and principles — including its imagery and vocabulary (e.g., metaphors, stories, traditions, etc.) — within their socially-constructed frames.⁵⁶ *Frames* may therefore correspond to: (a) the meaning people give to sustainability problems (*diagnostic framing*) and the consequent blame-attribution and identification of “culpable agents”;⁵⁷ (b) the proposed solutions (“or at least a plan of attack”)⁵⁸ as well as the reasonable strategies that need to be adopted to deal with the identified problems and to carry out the plan (*prognostic framing*); (c) the call for action, which provides “the rationale for engaging in ameliorative collective action” (*motivational framing*).⁵⁹ Following the available social movement literature, this third framing task constitutes the agency component of any framing activity. Indeed, motivational frames may actually help the researcher find the real *motives* behind (social) action.⁶⁰ They are commonly used by social actors (social movement activists, for example) to construct a normative justification (that is, a

Press, 2003), 11; as cited in Bradbury, “The Role of Grassroots Sustainability Associations,” 16.

⁵⁵ Bradbury, “The Role of Grassroots Sustainability Associations,” 16.

⁵⁶ “Social construction refers to the process in which two or more actors characterize a situation in the same way”. See Gray, “Framing Environmental Disputes”; as cited in Bradbury, “The Role of Grassroots Sustainability Associations,” 16.

⁵⁷ Benford and Snow, “Framing Processes and Social Movements,” 616.

⁵⁸ *Ibid.*

⁵⁹ Benford and Snow, “Framing Processes and Social Movements,” 618.

⁶⁰ David A. Snow and Robert D. Benford, “Ideology, Frame Resonance and Participant Mobilization,” *International Social Movement Research* 1 (1988): 197–218; as cited in Bradbury, “The Role of Grassroots Sustainability Associations,” 19.

moral-ethical rationale) for a given course of action. More importantly, since motivational frames often draw on a set of rhetoric and linguistic devices, they could be easily found in large-scale and affectively rich *narratives or stories of sustainability*. Narratives, as stated by Kim Etherington, are “stories of lived experience”.⁶¹ Sustainability narratives (which can be analysed by applying the methods of *narrative analysis*) can be defined as meaning-making structures that imaginatively inform human thought and experience of present-day sustainability problems; they also function as identity-building markers as well as authentic social acts aimed at responding to present and future sustainability challenges.⁶²

Moreover, following the approach of Snow et al. (1986), social movement actors may align their frames with those of potential adherents in order to make or keep their frames resonant to differing (potential) constituents. Snow and Benford developed four types of “frame alignment” strategies and processes, namely *frame bridging*, *frame amplification*, *frame extension* and *frame transformation*.⁶³ *Frame bridging* is the “linkage of two or more ideologically congruent but structurally unconnected frames regarding a particular issue or problem”;⁶⁴ *frame amplification* consists in the “clarification and invigoration of an interpretive frame that bears on a particular issue,

⁶¹ Narrative analysis was extensively used in my ethnographic fieldwork. On narrative inquiry, see Kim Etherington, “Narrative approaches to case studies,” accessed October 20, 2016, <http://www.keele.ac.uk/media/keeleuniversity/facnatsci/schpsych/documents/counselling/conference/5thannual/NarrativeApproachestoCaseStudies.pdf>. See also R. Lyle Duque, Review: Catherine Kohler Riessman, *Narrative Methods for the Human Sciences* (CA, USA: SAGE Publications, 2008). *Forum: Qualitative Social Research* (FQS) 11, no. 1, Art. 19 (January 2010), ch. 4, accessed October 2, 2016, <http://www.qualitative-research.net/index.php/fqs/article/view/1418/2906#g4>.

⁶² On this point, see for example Davis, “Narrative and Social Movements,” 3–22.

⁶³ See Snow et al., “Frame Alignment Processes,” 464 ff.; see also Benford and Snow, “Framing Processes and Social Movements,” 624.

⁶⁴ Snow et al., “Frame Alignment Processes,” 467.

problem or set of events”;⁶⁵ *frame extension* occurs when the primary framework of a social movement organisation is extended in order to “include or encompass the views, interests, or sentiments of targeted groups”;⁶⁶ *frame transformation* is applied whenever the initial old frames are radically transformed or even replaced by other understandings and meanings in light of a new assessment of the situation in place.⁶⁷ In the present empirical research, frame extension techniques were detected and analysed. To sum up, the overall approach of the empirical study illustrated in Chapter 6 oscillates between frame and narrative analysis. Crucially and consequently, previously tested methodological tools and practices for the analysis of new social movements were partially readapted to meet my specific research needs and objectives.

To conclude, it is worthwhile to note that the empirical study carried out in the present thesis deals with “real-life” data and involves living research participants (see Chapters 5 and 6).⁶⁸ In order to both ensure and protect the identity and confidentiality of both the collected data and of those (i.e., individuals, movements, associations, organisations) who participated in the research process, sensitive personal information and research reports concerning research participants (interview transcripts, field notes, etc.) were kept confidential. Further, the ethical requirements of informed consent were ensured and adhered to throughout the research process. Indeed, while

⁶⁵ Snow et al. “Frame Alignment Processes,” 469; as cited in Lasse Lindekilde, “Discourse and Frame Analysis,” in *Methodological Practices in Social Movement Research*, ed. Donatella Della Porta (Oxford: Oxford University Press, 2015), 208.

⁶⁶ Lindekilde, “Discourse and Frame Analysis,” 208.

⁶⁷ Benford and Snow, “Framing Processes and Social Movements,” 625.

⁶⁸ On confidentiality and anonymisation of research data, see for example, Andrew Clark, “Anonymising Research Data,” Economic & Social Research Council (ESRC), ESRC National Centre for Research Methods, NCRM Working Paper Series 7/06 (December 2006), 4–10, accessed October 6, 2015, <http://www.reallifemethods.ac.uk/research/wps/>.

conducting individual interviews and focus groups, informed consent (e.g., to participate in the research; to tape live/Skype individual interviews and/or focus groups; and for holding and using the collected data for research purposes) was obtained from all research participants. Additionally, collected data were (and are still) stored and kept in password secured files and folders. The main strategy to preserve the privacy of individuals (including third parties), as well as of research data, was to remove both direct and indirect identifiers (name, age, gender, sexuality, ethnicity, location, profession, education, political orientation, religious belief) from research data (e.g., notes, tapes and tape transcripts). All reasonable care was taken to ensure that no records of real names were kept and that all participants and places remained anonymous in the research output presented in this study. Therefore, in addition to the anonymisation of individuals in order for them not to be identifiable, the indication of places and research location was disguised or removed.

v. Delimitations

Previous research on the “greening of Islam” thesis (including its implications for Islamic and Muslim environmentalism),⁶⁹ as well as on ‘Islamically-oriented’ sustainability and commons management movements has been mostly carried out either in Western (mostly Anglo-Saxon) countries (US, UK and Europe, Canada, Australia) where many Muslim/non-Muslim Islamic scholars, Muslim intellectuals, activists, ENGOs and eco-communities live, work and express their voice, or in English-speaking Muslim-majority countries (e.g., Pakistan). Therefore, in the first part of my thesis, I mostly researched the English literature on this topic. This, of course, limited

⁶⁹ For example, as noted by Schwencke, the term “Islamic environmentalism” indicates “any form of environmentalism that refers to Islam to substantiate its views and actions”. See Schwencke, *Globalized Eco-Islam*, 5.

the cross-linguistic/cultural relevance of the theoretical research presented in Part I - Sections I and II.

In the second part of my research (see Part II - Section III), I mainly concentrated on empirical research. I analysed a group of sustainability movements currently active in the Arab-Muslim world (and, more specifically, in Arab North African countries) by searching for qualitative data available online and/or collected during my fieldwork. From a strictly methodological point of view, I had soon realised that one of the major limitations of any quantitative research in this field was the scarce availability and reliability of official (printed/digital) documents, databases, statistics and surveys about the sustainability-related (social and cultural) phenomena that are now occurring in predominantly Muslim contexts. Thus, the empirical evidence resulting from the qualitative/ethnographic analysis of the sustainability movements selected for this study proved to be more informative and illuminating. Further, since the above-mentioned empirical study is based on four social movements for sustainability based in Morocco and Tunisia (and, additionally, on a small number of interviews and focus groups), my field research was geographically restricted to these two Arab-Muslim countries and was thematically restricted to the area of contemporary (local) sustainability issues. The main working languages were English, French, and Arabic. Translation accuracy problems arose both due to the need to re-translate the French interviews and focus groups into English and to the realisation that some interviews were not easy to transcribe and translate because of the poor level of English, especially in francophone contexts.

vi. Dissertation outline

This dissertation has been divided into two parts, three sections and six chapters. It includes an introductory paragraph and a conclusion. The first part of this work (Part I - Section I) consists of the

theoretical analysis of the relation between religion and ecology and between Islam and ecology, with specific reference to the global(ised) phenomenon referred to as the “greening of Islam” (Chapter 1). This theoretical study also offers an illustration of the basic tenets of the Islamic eco-ethical and eco-theological doctrine and attests to the increasing relevance of so-called “ecological Islam” or “eco-Islam” in the international public debates on sustainability and sustainable development (Chapter 2). The same chapter addresses the recent global-scale emergence of Muslim and Islamic “green” habits and lifestyles. Section II, which discusses the relation between religion, ecology, and “economy of the commons”, is structured in two chapters. Chapter 3 traces out the current academic debate on environmental commons and its governance models. Chapter 4 focuses on the possible application of the Islamic rules and commons governance models for a sustainable access, use and management of the commons both in Muslim-majority countries and abroad.

In the second part of the present thesis (Part II - Section III), particular attention is paid to the ecological and ‘commons struggles’ experienced by social movements for sustainability in the Arab-Muslim world. Chapter 5 describes the various ways in which these contemporary sustainability movements have occupied central stage in the Arab world, especially since the post-revolutionary phase (i.e., since the 2011 Arab revolts). Further, it briefly presents the four case studies selected for the empirical study, which are overtly secular social movement organisations currently active in Morocco and Tunisia. The contribution of Chapter 6 consists of the in-depth, qualitative analysis of the four case studies presented in Chapter 5. Using frame and narrative analysis, the empirical study is mainly aimed at assessing the motivational influence of the “eco-Islamic” worldview on sustainability

engagement and activism in Morocco and Tunisia. Chapters 5 and 6 constitute the bulk of my study.

Part I – “Green” Islam

Section I: Religion and ecology

Introduction

The title of Section I immediately enjoins us to ask ourselves what the terms “ecology” and “religion” respectively mean, how they are mutually connected and why this connection really matters, especially in our current times.⁷⁰ In attempting to answer these questions, let us first turn to the concept of “ecology”. There is a general consensus that the German biologist, naturalist and public intellectual Ernst Haeckel (1834–1919) was the first to coin this term. The term “ecology” appeared on the international stage in 1866, when the word *Oecologie* (“ecology”) was used in a footnote on page eight of the first volume of Haeckel’s *Generelle Morphologie der Organismen*.⁷¹ In the second volume of his work, he defined ecology more extensively as “the whole science of the relations of the organism to the environment, including, in the broad sense, all the ‘conditions of existence’”.⁷² Consequentially, ecology emerged “as a subdiscipline of biology focused on how living systems and organisms survive and evolve through interaction with one

⁷⁰ For more on the concepts of “ecology” and “religion”, see, for example, Roger S. Gottlieb, “Introduction: Religion and Ecology — What Is the Connection and Why Does It Matter?” in *The Oxford Handbook of Religion and Ecology*, 4–19, online publication date: September 2009, accessed June 6, 2015, DOI 10.1093/oxfordhb/9780195178722.003.0001; see also Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O’Brien, “Introduction,” in *Grounding Religion: A Field Guide to the Study of Religion and Ecology*, eds. Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O’Brien (New York: Routledge, 2011), 1.

⁷¹ Ernst Heinrich Philipp August Haeckel, “Zweites Capitel - I. Morphologie und Biologie,” in *Generelle morphologie der organismen* (Berlin: G. Reimer, 1866), 8 (footnote 1), accessed July 7, 2015, <https://archive.org/details/generellemorphol01haec>. See also Robert C. Stauffer, “Haeckel, Darwin, and Ecology,” *The Quarterly Review of Biology* 32, no. 2 (June 1957): 138–44, accessed June 15, 2015, <http://www.jstor.org/stable/2816117>.

⁷² See Haeckel, *Generelle morphologie der organismen*, vol. 2, 286; translated by Robert C. Stauffer, “Haeckel, Darwin, and ecology,” 140. See also Aaron Jason Swoboda, “Tongues and Trees: Towards a Green Pentecostal Pneumatology” (PhD diss., The University of Birmingham, 2011), 11, accessed March 4, 2015, <http://etheses.bham.ac.uk/3003/1/Swoboda11PhD.pdf>.

another and their non-living environments”.⁷³ Thus, at that time, ecology formally became a new research subfield based on the Darwinist evolutionary theory of natural selection.⁷⁴ The word “ecology” is etymologically derived from the ancient and long-established Greek notion of house, household, and family (*oikos*).⁷⁵ For

⁷³ Kevin J. O’Brien, “Ecology,” in *Berkshire Encyclopedia of Sustainability*, vol. 1, *The Spirit of Sustainability*, ed. Willis Jenkins (Great Barrington, MA: Berkshire Publishing Group, 2010), 125.

⁷⁴ In the 1890s John Burdon-Sanderson officially categorised “ecology” as one of the three natural divisions of biology (physiology-morphology-ecology). In the early twentieth-century, the American plant ecologist Frederick E. Clemens (1874–1945) introduced the concept of ecology as the science of ecological communities. He described plant communities as single “super-organisms” or units of climax formation (1916). In the same period the American ecologist, botanist and taxonomist Henry A. Gleason (1882–1975) proposed an alternative view, called “individualistic hypothesis” (1917), according to which “plant communities are merely unstructured aggregates of independent plants”. See Ricardo Rozzi et al., eds., *Linking Ecology and Ethics for a Changing World: Values, Philosophy, and Action* (Dordrecht: The Netherlands; Springer, 2013), 222. The British animal ecologist Charles S. Elton (1900–1991), author of the book *Animal ecology* (1927), defined the term “ecology” as a “scientific natural history”. In less than three decades, other groups of ecologists offered modern definitions of ecology; among these, it is worth mentioning Andrewartha (1961): “the scientific study of the distribution and abundance of organisms”; Odum (1963): “the structure and function of Nature”; and C. J. Krebs (1972): “the scientific study of the interactions that determine the distribution and abundance of organisms”. See Massachusetts Institute of Technology, MIT OpenCourseWare (OCW), Civil and Environmental Engineering, “Ecology I: The Earth System,” “Lecture 1- Introduction to Ecology,” Instructors: Prof. Edward DeLong and Prof. Penny Chisholm, MIT Course Number 1.018J / 7.30J, Fall 2009, accessed March 4, 2015, http://ocw.mit.edu/courses/civil-and-environmental-engineering/1-018j-ecology-i-the-earth-system-fall-2009/lecture-notes/MIT1_018JF09_Lec01.pdf. See also O’Brien, “Ecology,” 125.

⁷⁵ Interestingly, the prefix eco-, which in turn comes from *oikos*, serves as the root for the words “ecology”, “economy/economics” and “ecumenism”. The neologism known as *ecology* literally indicates the knowledge or study of (*logos*) the household (*oikos*); the word *economy* refers to the “custom”, “rule”, or “law” (*nomos*) of the household (*oikos*), whereas *economics* is “the study of how humans manage households and systems”; *ecumenism* is “the effort to foster understanding and unity between different faith traditions”. See Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O’Brien, “Ecology: What is it, who gets to decide, and why does it matter?” in *Grounding Religion: A Field Guide to the Study of Religion and Ecology*, eds. Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O’Brien (New York: Routledge, 2011), 49–50. “In regards to the earth’s ecosystem, the household (*oikos*) of the universe is where everything (animate or inanimate) is understood to be related to everything else”. See Swoboda, “Tongues and Trees,” 11. Note that Pope Francis’ recent encyclical letter *Laudato Si’* (2015) bears the subtitle “On Care for our Common Home” in direct reference to the Greek word *oikos* (“household”). See Pope Francis, “Encyclical Letter *Laudato Si’* of the Holy Father Francis on Care for Our

Haekel, “ecology” signified our planetary home: the place where we humans live together with nonhumans. Accordingly, scientific ecologists defined ecology as the study of how organisms relate to each other and interact within their own environment. Since the second half of the nineteenth century, the science of ecology had progressively specialised into numerous sub-perspectives and sub-subjects. Some experts classified the fledgling scientific discipline either in line with taxonomic criteria (e.g., plant ecology, animal ecology, avian ecology, etc.) or in accordance with rigorous methodological approaches and fields of investigation.⁷⁶ In either case, unlike the Romantic philosophical ideals (see, for example, Rousseau’s primitivism) of the mid-seventeenth century,⁷⁷ which had proclaimed a return to a natural world represented as a harmonious, yet fixed and static entity, modern ecological science strived to investigate “nature”⁷⁸ as a reality in flux. Nature was thus depicted as a constantly changing reality made up of

Common Home” (Vatican City, The Holy See, Encyclical Letter May 24, 2015), accessed June 7, 2016, http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html. See also Pope Francis, *Praise Be to You - Laudato Si’: On Care for Our Common Home*, hardback ed. (Vatican City: Libreria Editrice Vaticana - San Francisco: Ignatius Press, 2015).

⁷⁶ The branches of ecology may also be classified either by geo-temporal criteria (marine ecology, tropical ecology, freshwater ecology, paleo-ecology), or by process-based criteria (behavioural ecology, physiological ecology, evolutionary ecology, etc.). See University of Alberta, “Biology 208 Principles of Ecology Course - Introduction to Ecology” (Edmonton, AB, Canada: University of Alberta, Department of Biological Sciences, Winter 2010), accessed June 4, 2016, http://www.biology.ualberta.ca/courses.hp/bio208/Lecture_Notes_files/Biol208_Lecture2_IntroductionToEcology.pdf. See also Bauman, Bohannon, and O’Brien, “Ecology”, 52.

⁷⁷ See Arthur O. Lovejoy, “The Supposed Primitivism of Rousseau’s ‘Discourse on Inequality,’” *Modern Philology* 21, no. 2 (November 1923): 165 ff.; accessed May 7, 2015, <http://www.jstor.org/stable/433742>.

⁷⁸ Indeed, the term “nature”, as Gottlieb tells us, is a contested one. The word “nature” may connote “the Earth’s system of living beings and the support systems for them”. See Gottlieb, *A Greener Faith*, xii. It may also refer to “the entire process of ongoing life, including humanity”. Yet, in some contexts, it is referred to as either “everything that is not human” (i.e., something separate from human cultures) or “the chemical, physical, and/or biological makeup of an entity”. See Bauman, Bohannon, and O’Brien, eds., *Grounding Religion*, 233.

open ecosystems that exchange energy and matter with their respective surroundings.⁷⁹ In short, modern ecologists were essentially committed to studying how naturally evolving systems had variously adapted in response to altered internal or external factors and conditions.⁸⁰

In the twentieth century, however, some environmental thinkers popularised the term “ecology” as a metaphysical claim, that is, as the vivid expression of a holistic and organicistic worldview about the natural world. Indeed, these scholars represented “nature” and its components, human beings included, as a unitary whole. Haeckel’s scientific project itself, as a matter of fact, was ideally aimed at finding a metaphysical truth that could allow humans to access the cosmic order and to reveal the necessary human (ecological) virtues.⁸¹ Similarly, in the 1970s the first proponents of such holistic ideas⁸² and universalist visions of the natural world (namely, “deep ecologists” and, to some extent, eco-religious thinkers)⁸³ maintained, in sooth, that the adoption

⁷⁹ Bauman, Bohannon, and O’Brien, “Ecology,” 55.

⁸⁰ For example, biotic factors (i.e., the living components of an ecosystem, such as plants, animals, fungi, bacteria) or abiotic conditions (water, sunlight, oxygen, soil and temperature).

⁸¹ Bauman, Bohannon, and O’Brien, “Ecology,” 49.

⁸² The term “holism” refers to “the theory that parts of a whole are in intimate interconnection, such that they cannot exist independently of the whole, or cannot be understood without reference to the whole, which is thus regarded as greater than the sum of its parts. Holism is often applied to mental states, language, and ecology”. “Holism,” (n.d.) in *Oxford Dictionaries Online*, accessed March 8, 2015, <https://en.oxforddictionaries.com/definition/holism>. For a complete account of holism in physics, see, e.g., Richard Healey, “Holism and Nonseparability in Physics,” in *Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta; first published: July 22, 1999; substantive revision: January 5, 2016, accessed May 8, 2016, <http://plato.stanford.edu/entries/physics-holism/>.

⁸³ The deep ecologist school is a philosophical movement founded by the Norwegian philosopher and climber Arne Næss in the 1970s. For an overview on deep ecology, see, e.g., Bron Taylor, “Deep Ecology and Its Social Philosophy: A Critique,” in *Beneath the Surface: Critical Essays in the Philosophy of Deep Ecology*, eds. Eric Katz, Andrew Light and David Rothenberg (Cambridge: MIT Press, 2000), 269–87, accessed March 6, 2016, http://www.brontaylor.com/environmental_articles/pdf/Taylor--DeepEcologyasSocialPhilosophy.pdf; David Clowney and Patricia Mosto, *Earthcare: An Anthology in Environmental Ethics* (Lanham: Rowman & Littlefield Publishers, Inc., 2009), 200 ff.. Unlike religious ecologists and ecotheologians, secular and more

of a general view about nature as a whole, integrated entity could enable humans to uncover the organising principle of the world — a world that in fact seemed to exist and function by virtue of its systemic orientation and interconnected structure.⁸⁴ A key figure in this field was the Catholic priest, cultural historian and ecotheologian⁸⁵ Thomas Berry,⁸⁶ who called for a new cosmological theory that would explain and guide the need for a just relationship between the human and nonhuman world.⁸⁷ For Berry, science is not inconsistent with religion as long as human development and proliferation on Earth is based on an “Earth Spirituality”, i.e. “an incarnational spirituality, an affirmation of the spiritual potential of matter, and a reflection of how we treat the

“radical” conservationists like the Norwegian philosopher and mountaineer Arne Næss (1912–2009) have proposed less human-centred philosophical and ethical reflections on ecological care and protection. Deep ecologists generally distrust those people who espouse anthropocentric (*viz.* caused or produced by humans) and instrumental conceptions of nature (that is, those people who deny its intrinsic value). Instead, they prefer to value nature in its own right, apart from its social or material usefulness to human beings. *Ecoreligious* thinkers are religious figures and leaders, theologians or, more generally, all people of faith who incorporate ecological concerns into their own religious worldview and activism. On ecoreligion, see Salvador Giner and David Tábara, “Cosmic Piety and Ecological Rationality,” *International Sociology* 14, no. 1 (March 1999): 59.

⁸⁴ Bauman et al. contend in this respect that “ecology calls particular attention to systems of interconnection, to the energy and material exchange between organisms, and to the relationships between the living and non-living worlds (minerals, rocks, and other organisms; or atmosphere, oceans, and land, for example)”. Bauman, Bohannon, and O’Brien, “Introduction,” 5.

⁸⁵ An ecological theologian (or eco-theologian) is a religious thinker who develops ecological ideas out of his/her faith tradition. Roger S. Gottlieb (2006), however, includes in this category the nondenominational spiritual writers who work in the scholarly field of religion and ecology/nature and ecology. See Gottlieb, *A Greener Faith*, 58.

⁸⁶ On the life and work of Thomas Berry (1914–2009), see Bauman, Bohannon, and O’Brien, “Ecology,” 53–4; and Gottlieb, *A Greener Faith*, 38–9.

⁸⁷ See Jai-Don Lee, “Thomas Berry’s New Cosmology and the Ecozoic Era,” in Proceedings of Eco-Sophia 2011, 43–4 (Paper presented at the Plenary Session – 8th International Whitehead Conference, “Creativity and Harmony: The Way of Eco-Sophia for the Future of Civilization, The Yotsuya Campus, Sophia University, Tokyo, Japan, September 26th–29th, 2011), accessed March 5, 2015, <http://iwc8-japan.com/proceedings/Plenary.pdf>.

material world”.⁸⁸ He thus called for a human reconciliation with the Earth’s innate spirituality, which was regarded as a healing response to the material exploitation and despoliation of the Earth’s resources. In this light, he envisioned a new story, “or mythic consciousness that will reunite humans with the creative energy of the universe and overcome our destructive spiritual estrangement from the source of life”.⁸⁹ In one of his books entitled *The Great Work* (1999), as summarised by Bauman et al., he contemplated the creation of an “ecological movement”, which he referred to as a global community of people familiarised with “the reality of cosmic interrelatedness and planetary interdependence”.⁹⁰ Furthermore, according to the cosmocentric (*viz.* universe-centred) and ecospiritual view espoused by Berry and his contemporary heirs, the strong emphasis scientific ecologists put on global interconnectedness, systemic change, and resilience is morally and socially worthless unless people start to realise that ecology is anchored to broader metaphysical questions. The underlying evolutionary mechanisms directing the world toward development, Berry’s disciples argue, equally involve human individuals/communities and “nature”. Humanity and “nature” (e.g., the world of forests, animals, plants, and the like), which are differentiated parts of the same cosmos, cannot however be considered either separate or separable from each other. On reflection, all beings and all things of the Universe appear to be mutually connected. Given such premises, these eco-scholars make it clear that it is more than

⁸⁸ Andrew J. Angyal, “Thomas Berry’s Earth Spirituality and the ‘Great Work’,” originally presented at Works of Love - Scientific & Religious Perspectives on Altruism, May 31st–June 5th, 2003; published in *The Ecozoic Reader* 3, no. 3 (Spring 2003): 35, accessed May 8, 2015, http://www.ratical.org/many_worlds/GreatWork.html. See also Bauman, Bohannon, and O’Brien, “Ecology,” 53. On Thomas Berry’s perspective, see also Gottlieb, *A Greener Faith*, 38–9.

⁸⁹ Angyal, “Thomas Berry’s Earth Spirituality,” 35.

⁹⁰ Bauman, Bohannon, and O’Brien, “Ecology,” 53.

legitimate to raise moral-ethical concerns about the role and responsibilities of human agents in nurturing, supporting and maintaining balance in this flexible yet interconnected natural world.⁹¹ A second corollary of their attempt to concentrate on this “universe story” is the consideration that people of faith ought not to turn a blind eye to the integrity, purposefulness, and spiritual essence of the natural world.

Since the late 1960s, the notion of “ecology” has also taken a third track, so to speak. In the Western world, and especially in the post-Second World War period, the term was mostly associated with environmentalism (namely, environmental activism), which emerged as a definite social and political movement focused on challenging ecological issues, such as pollution and global warming.⁹² Still, organised religions, as Roger Gottlieb has noted, played a limited role during the so-called ‘first wave’ of modern environmentalism, which was in fact dominated by left-wing, and mostly secular, environmental activists.⁹³ Somewhat ironically, present-day environmental activist movements include, instead, a vast array of religiously-inspired movements promoting grassroots social action through environmental and climate-focused campaigns and initiatives.⁹⁴ In any event, it is

⁹¹ See O’Brien, “Ecology,” 126.

⁹² On the negative outcomes of the present-day environmental movement, see Shellenberger and Nordhaus, *The Death of Environmentalism*, 6–25.

⁹³ Gottlieb, *A Greener Faith*, 8.

⁹⁴ An illustrative case of such campaigns is the global climate campaign. The IPCC’s recent reports highlight that human-caused changes in the climate system (if not addressed in time) will probably condemn the entire planet to permanent risk and instability. In response to this disastrous climate situation, transnational environmental/climate justice movements have come to the fore with the aim of: (a) mobilising people around locally/regionally-based ecological issues (desertification, pollution, etc.); (b) satisfying a global need for environmental/climate justice. Global climate justice (which belongs to the broader category of environmental justice), as Simon Hailwood tells us, is a moral vision that responds to the practical urgency of examining “questions about the justice or injustice of the distribution of these environmental hazards” among the living and non-living beings of the Earth. In order to get this global injustice fixed, climate campaigners are thus pushing for climate

worth stressing that contemporary environmentalism — which is ideologically and thematically heterogeneous because it has progressively diversified into a great number of both secular and religious-spiritual micro-movements — has increasingly spoken with a strong voice on global environmental and climate affairs. Most significantly, it has made its presence felt even in the atmosphere of denial and avoidance that permeates the work of some anti-environmental movements and organisations which, paradoxically, in some cases, make use of a greenwashed name to identify themselves and write under.⁹⁵ In short, all these eco-movements, which are increasingly globally-integrated, are taking practical steps to avoid both local and national/regional ecological decay and to save the entire planet from what they consider a human-induced global ecological catastrophe. They are concerned above all with averting the short-sighted beliefs, profit-maximising attitudes, and ecologically-unsustainable activities (e.g., unconstrained fossil fuel use, uncontrolled dumping of toxic waste, illegal hunting, development-induced displacement of people, etc.) held by some individuals, national governments and international/transnational actors belonging to the so-called “industrial civilisation”. Indeed, these environmental movements focus their ecological activism on fostering moral self-

action in various ways (e.g., by soliciting the international community for the zero carbon cause in order to reduce greenhouse gases emissions). Simon Hailwood, *Alienation and Nature in Environmental Philosophy* (Cambridge, UK: Cambridge University Press, 2015), 110.

⁹⁵ The so-called “anti-ecology movement”, as noted by Bernard Lammers, is a new political interest group which argues, for example, that “conservationists are mindlessly unaware of the importance of jobs and resources for the national welfare”. Bernard Lammers, “Preservation of the Adirondacks,” *Boston College Environmental Affairs Law Review* 1, Issue 3 (1971): 626, accessed May 5, 2015, <http://lawdigitalcommons.bc.edu/ealr/vol1/iss3/9>. On this topic, see also Carl Deal, *The Greenpeace Guide to Anti-Environmental Organizations* (Berkeley, CA: Odonian Press, 1993), 7–14, accessed May 6, 2015, <https://assets.documentcloud.org/documents/1997088/greenpeace-guide-to-anti-environmental.pdf>.

reflection and raising collective awareness about the present (and future) challenges posed by ecological disruption. All this in consideration of the fact that, for example, they offer the possibility of persuading people to change their individual and collective habits and lifestyles (consumer and transport choices, for example), as well as of abandoning exploitative socio-economic attitudes and corrupt political-institutional practices. In their view, both of the latter phenomena may have exacerbated, if not caused, the current global ecological problems. Interestingly, though, as Bauman et al. observed while commenting on Thomas Berry's view, the aforementioned ecological crisis (or ecocrisis)⁹⁶ not only manifests itself through environmental degradation (e.g., water scarcity, habitat destruction, species extinction, toxic pollution, the increase in greenhouse gas emissions), but also gives us clues as to *why* what is happening is happening. Indeed, the ecological footprint of humankind is exceeding the planet's capacity to support it because of the "wrong relationships within humanity and between our species and the rest of the world".⁹⁷

As previously noted, religious environmentalism has recently raised its "green" voice on the international political scene. The long-disputed debate about how to tackle the ecological crisis in a world

⁹⁶ In Takis Fotopoulos' words, the ecological crisis (or ecocrisis) can be defined as "the crisis which concerns not the relations between social individuals, as the other dimensions of the crisis, but our interaction, as social individuals, with the environment". Takis Fotopoulos, "The Ecological Crisis as Part of the Present Multi-dimensional Crisis and Inclusive Democracy," *The International Journal of Inclusive Democracy* 3, no. 3 (July 2007), accessed February 6, 2015, http://www.inclusivedemocracy.org/journal/vol3/vol3_no3_takis_torino.htm.

⁹⁷ Bauman, Bohannon, and O'Brien, "Ecology," 54. In a recent article (2014), Lekha Laxman et al. quoted the British Muslim intellectual Ziauddin Sardar (1985), who stated that the roots of the current ecological crisis can be found "in our belief and value structures which shape our relationship with nature, with each other and the lifestyles we lead". See Ziauddin Sardar, *Islamic Futures: The Shape of Ideas to Come* (London: Mansell, 1985), 218; as cited in Lekha Laxman, Abdul Haseeb Ansari, and Majdah Zawawi, "The Islamic Approach to Conserving Biodiversity For Global Sustainability: An Exploration," *Advances in Environmental Biology* 8, no. 3 (2014): 749, accessed March 8, 2015, <http://www.aensiweb.com/old/aeb/2014/748-764.pdf>.

where the whole system and its planetary-scale processes are dominated by human activities has thus captured the attention of a significant number of religious groups, leaders, theologians, and activists. Religious endeavours have responded to global environmental changes by coming to terms with humanity's surroundings (that is, the environment or natural world) from an explicitly theological and/or spiritual stance. For instance, ecologically-minded communities of faith — due to their typical emphasis on human justice and poverty issues, i.e., on issues related to *eco-justice*, which connects unresolved environmental problems (e.g., global warming, pollution, biodiversity loss, resource depletion) to human decline and poverty — have urged their fellow believers to halt further damage to the Earth. Their ecological commitment, indeed, is not only a question of religious or spiritual duty⁹⁸ but is likewise an indication of their moral efforts to alleviate human sufferings related to global socio-economic inequalities. Their main argument proceeds accordingly: the more that humanity in its entirety realises that human oppression affects and is simultaneously affected by a ravaged and devastated “nature”, the more inclined it will become to put an end to this self-destructive process through ecological self-commitment and public action. However, at root, these people of faith tend to interpret and communicate ecological issues according to their own religious core values and principles. In this case, again, etymology matters.

The origin of the modern lexeme “religion” lies in the Latin verb *re-ligare* (“to bind”). This “return to bondage”, at first glance, conveys an idea of *binding*, *obligation*, and *constraint* (e.g., to God and God’s

⁹⁸ The word “spirituality” refers here to a form of religiosity that does not need to express itself in an institutionalised religion or in a definite creed. Rather, as stated by Roger S. Gottlieb, “it is a kind of religiosity that accentuates personal experience, theological tolerance, and life-long pursuit of spiritual growth rather than attachment to an established religious normality”. Gottlieb, *A Greener Faith*, xii–iii; and 149–50.

commandments).⁹⁹ Some orthodox religious scholars derive the meaning of the term “religion” from the Hebrew Bible, in which a ‘classical’ story of “binding” is narrated: the *Akedah*, Abrahams’ aborted sacrifice of his son Isaac on Mount Moriah. Still, the term *ligare* can also be associated to the more elastic and polysemic concept of *connectivity*. Ecologists like to call it ‘interconnection’ and ‘interrelatedness’ of all earthly beings. Furthermore, as Lucas F. Johnston has suggested, “it is possible to envision the term religion as referring to a host of often overlapping and cross-fertilizing *families* of religious practice, experience, and function”.¹⁰⁰ There is little doubt, indeed, that historically all faith and spiritual traditions took shape as hybrid combinations among different elements, which had been taken and adapted from other creeds or cosmological-metaphysical theories.¹⁰¹ A similar but slightly different line of argument is found in Bauman et al. (2011). By comparing five sophisticated definitions of “religion”, they intend to better understand how and to what extent a multifaceted religious world can serve as a motivational resource for ecological awareness and action. In the words of the Christian theologian Paul Tillich (1886–1965), for example, “religion” —

⁹⁹ For Roger S. Gottlieb, “religions are systems of belief, ritual, institutional life, spiritual aspiration, and ethical orientation that view human beings as more than simply their social or physical selves”. Gottlieb, *A Greener Faith*, xii. For an extensive historical analysis of the concept of religion, see also Whitney A. Bauman, Richard R. Bohannon II, and Kevin O’Brien, “Religion: What is it, who gets to decide, and why does it matter?” in *Grounding Religion: A Field Guide to the Study of Religion and Ecology*, eds. Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O’Brien (New York: Routledge, 2011), 13–26; Rebecca Gould and Mark I. Wallace, “Religion: a dialogue,” in *Grounding Religion: A Field Guide to the Study of Religion and Ecology*, eds. Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O’Brien (New York: Routledge, 2011), 29.

¹⁰⁰ In this thesis, when I refer to “religion”/“religious” dimensions, I am also referring to “spirituality”/“spiritual” dimensions. On this point, see, e.g., Lucas F. Johnston, *Religion and Sustainability*, 21. For more on this term, see Bron Taylor, “The Greening of Religion Hypothesis (Part One),” n.p.

¹⁰¹ Bauman, Bohannon, and O’Brien, “Introduction,” 5. See also Seyyed Hossein Nasr, *The Encounter of Man and Nature. The Spiritual Crisis of Modern Man* (London: George Allen and Unwin, 1968), 51–80.

whatever and whenever the cultural origin and geographical extension of the term may pertain to — makes people think more about “ultimate concerns”, either by looking at “something” that rises above human beings themselves (namely, a Supreme Being), which becomes an object of human faith and devotion, or by experiencing transcendence. Still, Tillich’s idea of transcendence, universality, and eternity contrasts with more particularistic views. Bauman et al. analyse this tension by juxtaposing Tillich’s definition with the Japanese Zen Buddhist D.T. Suzuki’s immanentist definition of religion as the “universally human response” to the troubling experiences of life, which is always filtered through the world’s sufferings.

In another passage, they illustrate the Durkheimian approach to religion. The French sociologist Émile Durkheim (1858–1917) draws a clear line between sacred and profane, the former of which is said to better demarcate the religious dimension of human experience. Therefore, in their opinion, Durkheim interprets “religion” as something crafted by humans, i.e. as an artefact used by people as a special type of “social glue” that helps maintain an ordered and stable community of individuals. Further, they spell out two other definitions: the Geertzian and the Marxist. The North American cultural anthropologist Clifford Geertz (1926–2006), they seem to argue, conceives religion as a system of symbols that are socially constructed and deployed by communities of people over different periods of time. By contrast, Karl Marx (1818–1883) views religion as an oppressive ideology that hinders any possible socio-economic change. Religion is thus charged of purposefully obscuring human agency by letting human consciousness fade away and die. They conclude, however, that the definitional conundrums marking so much of the academic literature on “religion” do not exempt scholars from illustrating the distinctive contributions made by both theologians and non-denominational

spiritual writers toward the elaboration of creative thought for long-term social and ecological change.¹⁰²

To sum up, although the words “ecology” and “religion” can take on multiple meanings that flow into and reinforce each other,¹⁰³ both terms somehow (1) refer to a changing web of relationships — both of cooperation/mutuality and competition/struggle — among different types of entities and systems in the real world around us; and, more in general, (2) point to the dynamic interconnections that characterise our globe. This allows us to say that it is the all-connecting force of the natural world that has constantly provided moral inspiration and content to both religious and secular eco-thinkers. Additionally, a thorough understanding of the relationships between “nature” and “ecology” and between “nature” and “human culture (including religion)” — which are themselves “ecologies” — may actually help eco-thinkers to interpret the greater and more complex reality of which we humans are but a “natural” part.

On the one hand, however, some “nature-skeptic” ecologists believe that nature is not the great wild world beyond humanity and human culture. Nature does not exist as separate from human knowledge and experience. Hence, the very idea of nature is considered as socially-constructed and as having clear cultural implications.¹⁰⁴ For instance, these ecologists¹⁰⁵ consider the often-cited idea of the *natural sacredness* and *wilderness* of Mother Earth as a by-product of human culture — to wit, as a sort of spiritual creed fabricated by peoples and

¹⁰² See Bauman, Bohannon, and O’Brien, “Religion,” 14–26. For further insights on the academic usage of religion and on the way it functions within sustainability movements, see Johnston, *Religion and Sustainability*, 18–21.

¹⁰³ See O’Brien, “Ecology,” 125–8.

¹⁰⁴ See, for example, David Pepper, *Eco-Socialism: From Deep Ecology to Social Justice* (London-New York: Routledge, 1993), ch. 3.

¹⁰⁵ Among the most important authors are Bill McKibben (b. 1960) and William Cronon (b. 1954); see Bauman, Bohannon, and O’Brien, “Ecology,” 57.

societies with the goal of shaping their own visions of the world, making preferred decisions or justifying certain courses of action. Nature-skeptical ecologists therefore argue that the very concept of “naturalness” (or lack thereof), insofar as it appears to be a cultural product, could be extensively abused in certain contexts to exert human power, authority, and control over the *others* (e.g., animals, trees). For instance, as Bauman et al. pointed out, some eco-feminist scholar-activists (Carolyn Merchant, Vandana Shiva)¹⁰⁶ and cultural anthropologists¹⁰⁷ claim that the adjective “natural” has been misused by humans against humans (e.g., women, homosexuals, native peoples, refugees) for specific purposes, such as property-expropriation, racism, oppression, psycho-physical violence, social marginalisation and exclusion from the public domain. In their view, the supposed moral-ethical roots of these “androcentric”, manipulative and dehumanising attitudes have reproduced cultural stereotypes and have also legitimised “bad” human choices and actions toward the others (both living and non-living beings): violation of basic human rights, slavery of indigenous people and colonialism, animal abuse and neglect, massive deforestation, and the like.

It is also for this reason that contemporary scholarly discussions about the correlation between the “natural environment” and “human culture” matter a lot to ecologists — especially at the current time, when humanity is confronted not only with ecologically catastrophic scenarios but also with identity-based (be they ethnic-, religious-,

¹⁰⁶ See Amanda Baugh, “Gender,” in *Grounding Religion: A Field Guide to the Study of Religion and Ecology*, eds. Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O’Brien (New York: Routledge, 2011), 133. See also Diana Fuss, *Essentially Speaking: Feminism, Nature, and Difference* (New York: Routledge, 1989); Val Plumwood, *Feminism and the Mastery of Nature* (London: Routledge, 1993).

¹⁰⁷ See Bauman, Bohannon, and O’Brien, “Ecology,” 56; and Baugh, “Gender,” 133.

gender- or status-based) forms of discrimination and violence.¹⁰⁸ On the other hand, there are “nature religion” movements and natural environmentalist groups that defend the idea of nature *per se*. They argue that nature is something separate from human culture; thus, it is valuable in and of itself, as opposed to in relation to humans. Their non-anthropocentric view of nature portrays the natural world as a distinct and autonomous entity whose “wilderness” and pristine, pure state must be preserved and protected from human use and interference. To conclude, whatever our opinion regarding either side of the debate, it should be said that all these ecoscholar-activists agree on the substantial impact of human beings on “nature”, i.e., on the anthropic pressure on the natural resources of the Earth.

Focusing on the analysis and review of this peculiar religious-spiritual “green revival” in light of the new trends in contemporary ecological thought,¹⁰⁹ the aim of Section I is, therefore, to provide a critical overview of this vibrant field of research, which has been developing for more than thirty years.¹¹⁰ It thus performs the task of examining the current academic debate around the religion-ecology nexus by exploring its main theoretical and methodological principles and assumptions. It also introduces new concepts, such as “eco-religion”, “eco-theology”, “eco-ethics”, and “public theology”, with the goal of assessing the relevance of contemporary “eco-religions” in the international debate on sustainability (Chapter 1). Second, it offers a brief excursus of the doctrinal and legal-juridical roots of “eco-religiosity” within the wide-ranging Islamic tradition. It also spells out

¹⁰⁸ On this point, see Bauman, Bohannon, and O’Brien, “Ecology,” 56 ff.; on ecocide, see Martin R. Mason, *Doomsday Scenarios* (UK, US, Canada: Lulu.com, 2015), 24–31.

¹⁰⁹ For example, see J. Baird Callicott and Karen Mumford, “Ecological Sustainability as a Conservation Concept,” *Ecological Sustainability* 11, Issue 1 (February 1997): 32–40.

¹¹⁰ See Bauman, Bohannon, and O’Brien, “Introduction,” 4.

its multiple expressions through the communitarian vocation of some recent “eco-Islamic” movements created from the bottom-up in the global “green” public sphere (Chapter 2).¹¹¹

¹¹¹ Grassroots ecological activism, as noted by Eulalia Han (2013), is generally aimed at “encouraging social resilience, promoting the capacity of local communities and allowing green values to enter the national discourse”. See Eulalia Han, “Empowering the People: Towards the Inclusion of a Global Civil Society,” in *Governments’ Responses to Climate Change: Selected Examples From Asia Pacific*, eds. Nur Azha Putra and Eulalia Han (Singapore Private Limited: Springer Science & Business Media, 29 November 2013), 114. Social resilience, as W. Neil Adger tells us, can be defined as “the ability of groups or communities to cope with external stresses and disturbances as a result of social, political, and environmental change”. See W. Neil Adger, “Social and ecological resilience: are they related?” *Progress in Human Geography* 24 (2000): 347; as cited in Muriel Cote and Andrea J. Nightingale, “Resilience thinking meets social theory: Situating social change in socio-ecological systems (SES) research,” *Progress in Human Geography* 36, no. 4 (2012): 478, accessed May 5, 2015, <http://phg.sagepub.com/content/36/4/475.full.pdf>.

The urgent global plea for establishing, nurturing and maintaining respectful and durable relationships among “neighbours” and the subsequent search for a global “green” consensus about what to sustain over time (which often requires translating ecological value sets and worldviews between different constituencies) have been partly addressed at the local level. The transformative power wielded through the localised and communitarian sustainability struggles of our current times has therefore triggered some bottom-up societal responses. Sadly though, these grassroots initiatives for sustainability alone are not able to solve pressing problems such as climate change.

1. The global ecological crisis and the greening of religion

Although in the field of ecological studies it is still disputable whether or not the “global ecological crisis” is an impending and imminent threat, contemporary ecologists and scientists generally agree on the opinion that humanity and the Earth’s ecosystems are now living in an alarming state of uncertainty.¹¹² Many of the great threats humankind faces today in the so-called *Anthropocene* era — i.e., the peculiar time period in the Earth’s history in which humans have started to emerge as a ruling, dominant species endowed with a world-transforming power¹¹³ — are increasingly associated with environmental perils (floods, extreme weather events, toxic and industrial waste, etc.) and human illnesses (cancers, respiratory diseases, etc.).¹¹⁴ Here I recall Roger Gottlieb’s remark that “*the environmental crisis is a crisis of our entire civilization*”.¹¹⁵ For the formerly quoted American philosopher, this omnipresent, yet disavowed crisis has transformed “nature” into a new entity called the *environment*, “a nonhuman world whose life and death, current shape and future prospects, are in large measure determined by human

¹¹² See Intergovernmental Panel on Climate Change (IPCC), *IPCC Fourth Assessment Report: Climate Change 2007*, Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, eds. R.K. Pachauri and A. Reisinger (Geneva, Switzerland: IPCC, 2013), accessed March 7, 2015, http://www.ipcc.ch/publications_and_data/ar4/syr/en/contents.html; and idem, *Climate Change 2013: The Physical Science Basis*, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, eds. T.F. Stocker et al. (Cambridge, UK-New York, US: Cambridge University Press), accessed October 12, 2016, http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Frontmatter_FINAL.pdf.

¹¹³ See Thomas A. Reuter, “The Green Revolution in the World’s Religions: Indonesian Examples in International Comparison,” *Religions* 6 (2015): 1218, accessed May 5, 2016, DOI10.3390/rel6041217.

¹¹⁴ Other sustainability problems are, for example, resource depletion, biodiversity loss, species extinction, atmospheric and water pollution, climate change, deforestation, desertification, soil erosion, overpopulation, and overconsumption.

¹¹⁵ Roger S. Gottlieb, *This Sacred Earth: Religion, Nature, Environment* (New York: Routledge, 1996), 7.

beings”.¹¹⁶ According to this author, the ecological crisis of our time has already affected the way we produce, consume and eat food, no less than our mobility choices, energy options, and architectural-urban planning styles. He also suggests that its defining characteristics — e.g., its sheer magnitude and globalised impact, as well as its immediate, personal, and direct effects — have manifested themselves in different areas of acute concern: global climate/atmospheric change, toxic wastes, loss of land, loss of species, loss of wilderness, devastation of indigenous peoples, human patterns and quantities of consumption, genetic engineering, and the list continues.¹¹⁷

In the mid-1900s, the North American naturalist and writer Rachel Carson (1907-1964),¹¹⁸ author of the watershed environmental book *Silent Spring* (1962), temporarily reawakened Western people’s ecological conscience as regards the careless use of pesticides (namely, DDT and similar chemicals used for pest and disease control) in North American agricultural industries.¹¹⁹ Bearing in mind her work, contemporary ecoscholars maintain that this multidimensional, global-scale crisis has cast doubt upon the economic-technological excesses of Western modernity and culture, which draws heavily on natural resources and ecosystem goods obtained from nature. In his book

¹¹⁶ Gottlieb, “Introduction: Religion and Ecology,” 5.

¹¹⁷ Ibid.

¹¹⁸ Barry Commoner (1917–2012) was a North American biologist, professor and politician. He is regarded as one of the first pioneers of the modern ecological movement. Unlike Rachel Carson, he was particularly concerned with the social and economic origins of the ecological crises. For a brief commentary on his book *The Closing Circle* (1971), see Peter Dreier, “Remembering Barry Commoner,” *The Nation*, October 1, 2012, accessed May 6, 2016, <http://www.thenation.com/article/remembering-barry-commoner/>.

¹¹⁹ The awareness of an impending ecological crisis entered the popular culture of North America after the publication of Rachel Carson’s watershed book *Silent Spring* (1962). See Rachel Carson, *Silent Spring* (New York: Houghton, 1962). For more information on Rachel Carson, see Swoboda, “Tongues and Trees,” 13; Andrew Brennan and Yeuk-Sze Lo, “Environmental Ethics,” in *The Stanford Encyclopedia of Philosophy* (Fall 2016 Edition), ed. Edward N. Zalta, ch. 2., accessed July 26, 2015, <http://plato.stanford.edu/archives/fall2016/entries/ethics-environmental/>.

published in 1989, the famous American environmentalist Bill McKibben provocatively announced “the end of nature”, i.e. the total disappearance of the “pure” natural world because of human-induced environmental damage and devastation.¹²⁰ In short, he argues that the modern conception of progress, which has been permanently adopted throughout the anthropogenic age, has sharply impacted the natural world. Hence, the very notion of “nature” has become completely irrelevant to us.¹²¹ Our misconduct toward “nature”¹²² has in fact revealed the fragility of the socio-ecological systems on which both present and future generations depend. Therefore, a morally decent conduct toward the environment is truly imperative in current times. Notwithstanding his worried admonishment, most of modernity’s patriarchal, elitist, and anthropocentric (*viz.* human-centred)¹²³ social systems, it seems to me, continue to hinder any attempt to bolster our global ecological commitments.¹²⁴

Religions in this respect have made no exception.¹²⁵ Seen from a historical perspective, religious moral teachings and spiritual practices

¹²⁰ See Bill McKibben, *The End of Nature* (New York: Random House, 1989). In this book, McKibben seems to contend that the evidence of global climate change (which is determined by the increase in GHG emissions and by other human activities) defies the idea of “nature” as an external, broader dimension of human life and existence. See Bauman, Bohannon, and O’Brien, “Ecology,” 57.

¹²¹ *Ibid.* See also Gottlieb, *This Sacred Earth*, 11.

¹²² Roger S. Gottlieb considers “nature” as “that commonsense construct in which we view the universe, the geological earth and its life forms as a prehuman unity, separate and independent from humanity”. See Gottlieb, *This Sacred Earth*, 12.

¹²³ See Willis Jenkins, “Anthropocentrism,” in *Berkshire Encyclopedia of Sustainability*, vol. 1, *The Spirit of Sustainability*, ed. Willis Jenkins (Great Barrington, MA: Berkshire Publishing Group, 2010), 22.

¹²⁴ Patriarchal-authoritarian social systems might foster misogyny, (environmental) racism, religious fundamentalism, addictive consumerism, commodification of natural resources in a globalised market economy (see Chapter 3), and so forth.

¹²⁵ Following Elspeth Whitney’s line of argument, Lynn White Jr.’s legacy still has a role to play in this important scholarly debate. White’s thesis, as discussed by Whitney in one of her recent papers (2015), explains how the anthropocentric (*viz.* human-centred) and alienating attitude of Medieval Christianity towards nature has historically shaped the Western world. Further, she argues that the West has for some time benefitted from the fruitful nineteenth-century combination of modern science

have provided believers with norms of conduct and rituals (prayer, meditation, celebration) that have made it easier for them to build up specific interpersonal relationships and to shape their everyday behaviour within different social settings (e.g., family, community). However, the question arises whether there is any place left for non-human/non-living beings in some conservative (other-worldly, utopian and, at worst, reactionary and fundamentalist) forms of religiosity. Indeed, religious anthropocentrism — that is, the religious view according to which the distinctive spiritual nature of human beings has provided them with special endowments and privileges, compared to the other inhabitants of the Earth¹²⁶ — has been charged of having supported ecologically-unsustainable materialistic and consumerist cultures, first in Western European capitalistic countries and then elsewhere in the world. Clearly, human beings may have been commanded to be good stewards and trustees of God's Creation, but at the same time this commandment has located humanity at the centre of the moral universe. Moreover, insofar as human interests are morally prioritised over other-than-human interests, this anthropocentric approach may result in the human failure to respect or care beyond the human world.

Yet, the main point here is that, although some organised religions might have implicitly or explicitly defended the industrial-capitalistic

and technological advancement, but at the expense of nature. She also contends that, despite his somewhat simplistic and exaggerated view, Lynn White Jr. made the important point that religion has powerfully redefined the human relationships with the natural world. See Lynn White Jr., "The Historical Roots," 1205. See also Elspeth Whitney, "Lynn White Jr.'s 'The Historical roots of our ecological crisis' after 50 Years," *History Compass* 13, no. 8 (2015): 397, accessed May 5, 2015, DOI 10.1111/hic3.12254; Anders Biel and Andreas Nilsson, "Religious Values and Environmental Concern: Harmony and Detachment," *Social Science Quarterly* 86, Issue 1 (March 2005): 178–9, accessed May 5, 2015, DOI 10.1111/j.0038-4941.2005.00297.x.

¹²⁶ Gottlieb, "Introduction - Religion and Ecology," 5.

society's mechanistic ways of understanding the Earth and the ecosphere, the present ecological crisis is compelling many spiritually-informed people to revert this self- (and other-) destructive process. Nowadays, theologians and religious leaders, along with ordinary people of faith, are not hostile to technological innovation and scientific research. Rather, they disapprove of "the dominant social structures of industrialized society"¹²⁷ and the business-as-usual, ecologically-destructive laws, policies, and measures taken by some national/regional political authorities, profit-oriented corporate and business sectors, international financial institutions, and so on. By promoting a value-laden and socially-responsible *green shift* (i.e., a shift toward a more sustainable future),¹²⁸ the representatives of these new *ecological religions* (also named *green religions*, *ecoreligions* or *ecofaiths*)¹²⁹ make a plea for reviving religious people's ecological vocation at both the individual and communitarian levels.¹³⁰

In sum, notwithstanding the contentious issue regarding the initial 'bad reputation' of religious people with respect to ecological awareness and Creation care,¹³¹ the rapid disappearance of "nature" has made several theologians, religious/moral authorities (Popes, bishops, etc.), and religiously-based social movements realise that human action stands at the core of this. In order to combat sustainability problems, these emerging movements of ecologically-engaged religious people

¹²⁷ Gottlieb, "Introduction - Religion and Ecology," 6.

¹²⁸ See Gary Fevrier, "Water For Life," *Gary Fevrier* (blog), March 6, 2010, accessed May 6, 2015, <http://garryfevrier.blogspot.it/2010/03/water-for-life.asp>.

¹²⁹ As stated by Salvador Giner and David Tábara (1999), "ecoreligion is not a single faith: it is shared by more than one religion. It forms a common ground. In some cases, it may be quite peripheral within one scheme of things religious, within a clear-cut tradition. In others, however, ecoreligion may be at the core of a given faith". See Giner and Tábara, "Cosmic Piety and Ecological Rationality," 61.

¹³⁰ See Laurel Kearns and Catherine Keller, eds., *Ecospirit: Religions and Philosophies for the Earth* (New York: Fordham University Press, 2007), xi.

¹³¹ See Lynn White, Jr., "The Historical Roots," 1203–12.

provide an antidote: ecoreligions. Consequently, ecoreligions and their activist side (religious environmentalism) are closely allied in this endeavour. Many ecoreligious scholars and practitioners champion the re-establishment of ‘eco-friendly’ traditional religious teachings (Calvin DeWitt), whereas others emphasise that caring for the Earth requires a green-religious reformation.¹³² This second attitude generally characterises those ecot thinkers who see the reformation of worship traditions as an effective response to the most recent moral concerns about the ruthless destruction of nature. Their remarkable concerns reflect their “cosmophilic stance”, i.e. a deep love for the universe.¹³³ From the activist perspective, a consistent number of religiously-driven ecological movements acknowledge that a deep moral (and, indeed, political and social) change can be a rational and viable ‘exit strategy’ for effectively facing the gloomy and daunting ecological crises of the twenty-first century.¹³⁴ In the last decade, many of these more or less “ecocentric”¹³⁵ theologians and religious activists have been

¹³² Bauman, Bohannon, and O’Brien, “Ecology,” 60.

¹³³ As noted in the Introduction of this thesis, almost all religions evolve by entering into dialogue with natural forces. For this reason, the natural world has been continuously affected by the specific ways in which religious ideas have influenced people’s values, beliefs and practices. On this point, see Johnston, *Religion and Sustainability*, 86–90, and 107.

¹³⁴ On moral corruption, see for example Stephen M. Gardiner, “A Perfect Moral Storm: Climate Change, Intergenerational Ethics and the Problem of Moral Corruption,” *Environmental Values* 15 (2006): 407–9.

¹³⁵ Bauman et al. (2011) state that “ecocentrism [is] a moral stance that takes ecosystems as the basis and center of value, seeking to protect and sustain the conditions necessary for the interconnected coexistence of life within a system. This is a proposed alternative to anthropocentrism”. See Bauman et al., eds. *Grounding Religion*, 230. Likewise, John Halstead declares that “an eco-centric or bio-centric perspective perceives that human beings are an interconnected part of a vast biotic community in which human beings have special responsibilities, but do not have any greater right to exist than any other form of life”. See John Halstead, “How Deep Is Your Ecology?” *Humanistic Paganism* [blog], April 10, 2015, accessed May 6, 2016, <http://humanisticpaganism.com/2015/04/10/how-deep-is-your-ecology-by-john-halstead/>. As explained by Craig Chalquist, the term “ecocentric” was coined by Warwick Fox in order to distinguish it from the term “biocentric” (i.e., environment-centred). Both terms “contrast with the more human-focused perspective prevalent in industrialized nations”. See Craig Chalquist, “A Glossary of Ecological Terms,”

successfully engaged in various environmental and climate justice struggles. The North American Christians fighting against mountaintop removal mining in Appalachia, their fellow eco-Muslims engaged in eco-halal food projects and the religiously-inspired global climate justice movements involved in the UN climate negotiations are all seeking to bring about an “ethical revolution” for sustainability’s sake. In a globalised world, religious values and principles may therefore become a source of human motivation, support, wisdom and empowerment in the face of our common environmental problems.

In conclusion, although human-centred religious worldviews may harm the environment, new forms of ecoreligiosity are actively seeking to build a more sustainable world, with the help of their set of core values and beliefs. Some strains of contemporary ecoreligions deal with the current ecological crisis by bearing on their own deep-rooted and traditional moral resources. Their eco-religious views reach, however, only their narrow circle of adherents. By contrast, many other people of faith are either reforming or reinventing their own religious traditions in order to make these “green” and untrodden challenges important to a much wider audience. Within this multifarious cultural and social framework, the ecoreligious movement has actually nurtured a globalised spiritual movement devoted to respecting the whole of life on Earth.

terrapsych.com, accessed October 12, 2016,
<http://www.terrapsych.com/ecology.html>.

1.1. The ethics of caring for the (ecological) “others”

As mentioned earlier, we live in a world in crisis, and part of this crisis — which affects us all because of its global scale and proportions — is considered to be human-made. Thus, what contemporary scholars and experts generally call the global ecological crisis requires unprecedented human efforts to protect and nurture the Earth’s animate and inanimate inhabitants. It goes without saying that any moral reflection or judgment on ecological problems has direct ethical (and political) implications.¹³⁶ Further, it can be claimed that any moral proposition regarding ecological issues presupposes the (re-)foundation of *ecological ethics* (also called *ecoethics*), which is generally composed of “moral principles governing the human attitude toward the environment, and rules of conduct for environmental care and preservation”.¹³⁷

As stated by Lynn White Jr., “what people do about their ecology depends on what they think about themselves in relation to things around them”.¹³⁸ The relationship between human beings and their own environment hinges, for example, on: (a) people’s value choices regarding the definition of human and non-human well-being; (b) principled considerations about the (present and future) human impact on the quality and integrity of the Earth’s life-support systems; (c) general ideas about the legacy present generations want to leave to

¹³⁶ According to Sandro Pignatti, “ethics” can be defined as “the discipline which studies the rules and options which govern human behavior”. See Sandro Pignatti, “A discussion on the foundations of environmental ethics,” *Rendiconti Lincei - Scienze Fisiche e Naturali* 24, Issue 2 (2013): 91, accessed May 5, 2016, DOI 10.1007/s12210-013-0226-4.

¹³⁷ OECD, “Ecological Ethics,” in *Glossary of Environment Statistics*, Studies in Methods, Series F, No. 67 (New York, United Nations, 1997). Glossary entry created on September 25, 2001; last updated on November 6, 2001; accessed October 13, 2015, <https://stats.oecd.org/glossary/detail.asp?ID=716>.

¹³⁸ Lynn White Jr., “The Historical Roots,” in *Worldviews, Religion and the Environment: A Global Anthology*, ed. Richard C. Foltz (Australia; Belmont, CA: Thomson/Wadsworth Publishing, 2003), 33.

future generations of living/non-living beings.¹³⁹ Besides that, as averred by Lynn White Jr., since “human ecology is deeply conditioned by beliefs about our nature and destiny”,¹⁴⁰ some ethical responses to the global ecological crisis retain explicitly religious-spiritual aspects. For example, recent research in the academic field of “religion and ecology”¹⁴¹ (cf. par. 1.2) indicates that the current ecological crisis is, among other things, a human moral crisis, “a crisis of human culture, i.e. a spiritual crisis”.¹⁴²

From the mid-nineteenth century, as the American professor of philosophy Roger S. Gottlieb tells us, even the leading figures of North American Transcendentalism (Ralph Waldo Emerson, Henry David Thoreau, then followed by the Scottish American John Muir, founder of the Sierra Club in 1892, and by Robert Marshall) had combined mystical-spiritual values and principles with their personal experiences of “wilderness” and ecological activism.¹⁴³ As well, contemporary ecot thinkers somehow try to mimic religious-spiritual languages in order to (a) redesign the boundaries of human morality (with the aim of including nonhuman species and ecosystems within the ethical domain); and (b) raise new eco-ethical concerns about the dire impact of the global ecological crisis¹⁴⁴ on both human and non-human

¹³⁹ See Foltz, ed., *Worldviews, Religion and the Environment*, 4.

¹⁴⁰ See Lynn White Jr., “The Historical Roots of Our Ecologic Crisis,” in Foltz, ed., *Worldviews, Religion and the Environment*, 33.

¹⁴¹ Richard C. Foltz prefers to use the terms *worldviews* and *environment*. See Foltz, ed., *Worldviews, Religion and the Environment*, xiv.

¹⁴² Daniel Munteanu, “Public Theology as a Substantial Contribution to an Ecumenical and Ecological Culture,” in *Religion and Ecology in the Public Sphere*, eds. Celia Deane-Drummond and Heinrich Bedford-Strohm (London: Continuum/T & T Clark, 2011), 161. See also Gottlieb, “Introduction: Religion and Ecology,” 11.

¹⁴³ Gottlieb, “Introduction: Religion and Ecology,” 15.

¹⁴⁴ See Michael S. Northcott, “Environmentalism,” in *The Encyclopedia of Politics and Religion: 2-volume set*, ed. Robert Wuthnow (London, UK: Routledge, 1998), 235.

evolution.¹⁴⁵ They believe that the application of more responsive and long-termist moral thinking toward ecological problems¹⁴⁶ may compel people to adopt a specific kind of ethical reasoning — that is, a peculiar way of valuing and appreciating “things” and, above all, “nature”. This mode of thinking refuses, for example, to relegate the anthropogenic (i.e., human-made) origin of the ecological crisis to the margins of global public policy and interest.¹⁴⁷ Moreover, in adopting this new “ecoethical posture”, ordinary people may also be asked to pay special attention to the configuration of certain human moral obligations and duties toward the natural environment. This demand, in turn, is based on the expectation that all humans may eventually come to see the well-being of the natural world as a precondition for (present and future) human existence and material-spiritual flourishing, *and vice versa*.

More interestingly, though, in order to be really pertinent and effective, the endorsement of such an “ecoethical call” has to first encourage and persuade people to attach moral standing,¹⁴⁸ dignity, and sovereignty to the Earth and its diverse life-forms by means of their own *learned experiences* of embodiment and embeddedness in

¹⁴⁵ See Johnston, *Religion and Sustainability*, 140 ff.; as stated by Takis Fotopoulos in a recent article (2007), the current ecological crisis concerns “our interaction, as social individuals, with the environment”. See Fotopoulos, “The Ecological Crisis as Part of the Present Multi-dimensional Crisis...,” n.p.

¹⁴⁶ Examples of ecological problems are biodiversity loss, ecosystem degradation, extinction of species, pollution, global climate change.

¹⁴⁷ For example, K. Baslar calls for “the development of an ethic, of a body of norms and attitudes, which is protective to the environment and seeks to husband and enhance, rather than exploit and exhaust, the world’s resources.” See K. Baslar, “The stewardship ethic,” *The Fountain Magazine*, Issue 2, April-June 1993, accessed October 13, 2016, <http://www.fountainmagazine.com/Issue/detail/The-stewardship-ethic>.

¹⁴⁸ To put it in simple words, environmental ethicists argue that it is very likely that if moral agents do not consider nature and its properties as intrinsically valuable, they will never feel obliged to take responsibility for its protection nor will they ever refrain from damaging it. See, for example, Marcello Di Paola, “Out of the Wild: A Garden-based Theory of Biodiversity Conservation” (PhD diss., LUISS University Guido Carli, 2010), ch. 1.

nature.¹⁴⁹ This “existential conversion” to a true life of connection and belonging to the Earth would make people feel profoundly involved in what they are responsible for. The subsequent individual and collective activation of some ecological virtues (love, wisdom, compassion, respect, etc.), as well as the fostering of a zealous spiritual life and/or experiences of faith at different levels (individual, family, civic society, political-structural),¹⁵⁰ may assist individuals and groups in working together for the universal “common good”.¹⁵¹ In fact, tangible human attempts at seeking and cultivating not only locally-based decisions for the “common good”, but also cosmic, planetary solutions for the global “common good” — i.e., “a good shared in common that transcends but also includes the good of individuals”¹⁵² — might turn out to be crucial in coming to grips with the current ecological crisis.

The Scandinavian philosopher Arne Næss, who forged the concept of “deep ecology” in his 1973 article “The Shallow and the Deep, Long-Range Ecology movements”,¹⁵³ forcefully argued that any human being ought to identify with and regard itself as an essential part of the biotic community. For Næss, “nature” deserves neither more nor less respect than humans because there are no boundaries between the two. For we humans are in fact “nature”, just as all the other organisms

¹⁴⁹ That is, “ecosystemic wholes” in which all constituents are deeply interrelated. The expression “ecological wholes” refers to species, populations, biotic communities and ecosystems. See Brennan and Lo, “Environmental Ethics,” in *The Stanford Encyclopedia of Philosophy*, 5.

¹⁵⁰ See also Celia Deane-Drummond, “Public Theology as Contested Ground: Arguments for Climate Justice,” in *Religion and Ecology in the Public Sphere*, eds. Celia Deane-Drummond and Heinrich Bedford-Strohm (London: Continuum/T & T Clark, 2011), 204.

¹⁵¹ For more information on the concept of “common good”, see, for example, Daniel P. Scheid, “Common Good,” in *Berkshire Encyclopedia of Sustainability*, vol. 1, *The Spirit of Sustainability*, ed. Willis Jenkins (Great Barrington, MA: Berkshire Publishing Group, 2010), 71–2.

¹⁵² *Ibid.*

¹⁵³ See Arne Næss, “The Shallow and the Deep, Long-Range Ecology Movement,” *Inquiry* 16 (1973), 95–100.

and entities in the biosphere are “nature” and all things have an equal right to live and unfold — as his sense of *biospheric egalitarianism* dictates.¹⁵⁴ Hence, believing in self-respect and avoiding harm is equivalent for him to respecting and caring for “nature”. Thus, all organisms and entities of the ecosphere ought to be valued and taken care of independently of their usefulness to human vital needs and purposes. Further, his idea that the human goals of spiritual growth and maturity may be conducive to a complete *self-realisation* rests on the person’s willingness to be part of and reconnect with something that is larger than the individual self. As a matter of fact, it is the individual’s disclosure of his/her “expanded and empowered selves” *in relation with* his/her human (e.g., future generations)¹⁵⁵ and non-human “others” (animals, plants, wind, rain, oceans, mountains, and the like) that actually generates an ecologically-responsible “self-in-Self” — “where ‘Self’ stands for organic wholeness”.¹⁵⁶

To this I would add that in order to accept and make room for the “otherness” of the (ecological) “other”,¹⁵⁷ one first needs to step out of

¹⁵⁴ According to Naess’ *ecosophy* (literally, “ecological wisdom”), *biospheric egalitarianism* is “the view that all living things are alike in having value in their own right, independent of their usefulness to others. The deep ecologist respects this intrinsic value, taking care, for example, when walking on the mountainside not to cause unnecessary damage to the plants” See Brennan and Lo, “Environmental Ethics,” in *The Stanford Encyclopedia of Philosophy*, par. 3.1, accessed August 5, 2015, <http://plato.stanford.edu/entries/ethics-environmental/>. On Naess’ intuition of biocentric equality, see also Bill Devall and George Sessions, “Deep Ecology: Living as if Nature Mattered” in *Worldviews, Religion, and the Environment: A Global Anthology*, ed. Richard C. Foltz (Australia; Belmont, CA: Thomson/Wadsworth Publishing, 2003), 435–36.

¹⁵⁵ See Ernest Partridge, “Future generations,” in *A Companion to Environmental Ethics*, Dale Jamieson ed. (Oxford, UK; Malden, Mass., USA: Blackwell, 2003), ch. 26.

¹⁵⁶ To sum up, it becomes clear that Naess’ ultimate norms (*biospheric egalitarianism* and *self-realisation*) and principles of deep ecology, which are at odds with more conservative-anthropocentric views, have reshaped public moral discussions about ecological goods and evils. See Devall and Sessions, “Deep Ecology,” 435.

¹⁵⁷ See Peter Manley Scott, “Right Out of Time? Politics and Nature in a Postnatural Condition,” in *Religion and Ecology in the Public Sphere*, eds. Celia Deane-

one's physical, material, and cultural 'comfort zone'. This mental process starts by making the decision: (1) to get rid of the ontological distinction between self and the other (or between humans and nonhumans); (2) to feel identified and connected with the other; and (3) to situate oneself "alongside the other" with humility, generosity and empathy.¹⁵⁸ The resulting act would be neither the product of merely social-altruistic pulses¹⁵⁹ nor the expression and aggregation of rationally-driven moral preferences; it would rather be the end point of a long-term process of mutual knowledge and interaction.¹⁶⁰ Indeed, this *relational, inclusive, and solidaristic* approach to both human/human and human/non-human relations, despite its criticalities and setbacks (especially with regard to the non-reciprocal human responsibility toward posterity), has facilitated the flourishing, coexistent, miscegenetic and eclectic combinations among diverse "entities" (e.g., peoples, languages, religions) across different historical epochs. In some ways, in my view, the human act of engaging in fellowship and cooperation may sway ecosystems and the biophysical world toward integrity, stability and beauty.

The North American wildlife conservationist Aldo Leopold (1886–1948) in his posthumously published book *The Land Ethic* (1949) openly said: "all ethics so far evolved rest upon a single premise:

Drummond and Heinrich Bedford-Strohm (London: Continuum/T & T Clark, 2011), 60.

¹⁵⁸ Lucas Johnston calls it "an ethic of interpersonal and intercultural risk", i.e., "an approach that entails viewing political, social, or cultural "others" from a standpoint of humility, vulnerable to (or at least willing to empathetically consider) other's worldviews, values, and behaviors". See Lucas F. Johnston, *Religion and Sustainability*, 11; and idem, "Sustainability as a Global Faith? The Religious Dimensions of Sustainability and Personal Risk," *Journal of the American Academy of Religion* 82, no. 1 (March 1, 2014): 49, accessed March 3, 2015, DOI 10.1093/jaarel/lft056.

¹⁵⁹ For a complete overview on this topic, see for example Giovanni Felice Azzone, *La moralità come adattamento: altruismo degli animali e moralità degli esseri umani*, Milano: Zadig ed., 2002.

¹⁶⁰ See Celia Deane-Drummond, "Public Theology as Contested Ground," 197–8.

that the individual is a member of a community of interdependent parts. His instincts prompt him to compete for his place in that community, but his ethics prompt him also to co-operate (perhaps in order that there may be a place to compete for)".¹⁶¹ Of course, being engaged in fellowship and cooperation in accordance with Leopold's ecocentric ideal of "land-community"¹⁶² is not an easy task, but there is little doubt that in current times we need an ethical, spiritual and *religious* turn to ecology.

1.2. The academic study of religion and ecology

Over the last forty years, the academic debate on "religion and ecology"¹⁶³ has been constantly engaged in the examination of the role of the world's mainstream religions in shaping the ways in which humans ought to show respect and protect the Earth and its life forms. For example, the genuine theoretical work and empirical studies published by the academic community dealing with this subject have addressed the religiously-inspired social reactions to the catastrophic impact of some "ecocide stories"¹⁶⁴ on both human and non-human

¹⁶¹ Aldo Leopold, "The Land Ethic," in *A Sand County Almanac, and Sketches Here and There* (New York: Oxford University Press, 1949), 201.

¹⁶² According to Aldo Leopold, the land-community is an enlarged community that includes "soils, waters, plants, and animals, or collectively: the land". See Leopold, *A Sand County Almanac*, 203–4.

¹⁶³ This US-based interdisciplinary academic tradition, which is often referred to as the "religion and ecology" platform, constantly evolves thanks to the precious contributions made by philosophers, ethicists, theologians, sociologists, cultural anthropologists, historians, political scientists, etc.; basically, it promotes critical thinking about the religion-ecology nexus.

¹⁶⁴ According to Polly Higgins, the term "ecocide" refers to "the extensive destruction, damage to or loss of ecosystem(s) of a given territory, whether by human agency or by other causes, to such an extent that peaceful enjoyment by the inhabitants of that territory has been severely diminished". See Polly Higgins, *Eradicating Ecocide: Laws and Governance to Prevent the Destruction of Our Planet* (London, UK: Shephard-Walwyn, 2010), 63. In a recent book, Celia Deane-Drummond discusses Alastair McIntosh's description of the ecological crisis as a human moral and spiritual crisis. She explains that, according to McIntosh, humans have a "pathological, addictive tendency to ecocide – human beings go on behaving in the same way, even though they know full well that it is damaging them and all around them" (e.g.,

welfare. A considerable group of scholars have thus scrutinised the culturally diversified eco-religious values, principles, and beliefs that may provide people with moral motivation for taking both individual and collective action toward ecological sustainability. More specifically, these authors have enquired as to the correlations among the free expression of religious-spiritual sensitivities, the cultivation of personal ecological consciousness, and specific forms of collective social mobilisation within the global framework of an emerging “green” public space.¹⁶⁵

Yet, some introductory assumptions should be made in order to assess the state of the art in this discipline. First, most contemporary scholars in this field highlight that the nexus between religious/theological traditions and ecological reflection mainly resides in an underlying shared idea of a unified, interconnected and balanced cosmos.¹⁶⁶ Thereby, theology is not inconsistent with ecological science. Due to the fact that they are both in search of metaphysical/cosmological truths and ultimate explanations, religion and science, in their view, are not at odds with each other.¹⁶⁷

Secondly, the same scholars claim that it is helpful and prudent, by and large, to *empirically detect* the complex linkage between the metaphysical/cosmological metaphors that are publicly adopted by the

massive extinction of species, small atoll islands vanishing because of rising sea-levels, etc.). See Celia Deane-Drummond and Lisa Sideris, “Ecology: a dialogue,” in *Grounding Religion: A Field Guide to the Study of Religion and Ecology*, eds. Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O’Brien (New York: Routledge, 2011), 68.

¹⁶⁵ See, for example, Foltz, ed. *Worldviews, Religion, and the Environment*, Part Three; Gottlieb, “Introduction: Religion and Ecology”, 4 ff.; Deane-Drummond and Bedford-Strohm, “Introduction,” in *Religion and Ecology in the Public Sphere*, eds. Celia Deane-Drummond and Heinrich Bedford-Strohm (London: Continuum/T & T Clark, 2011), 1–14; Johnston, *Religion and Sustainability*, ch. 1; Clifford Chalmers Cain, ed., *Many Heavens, One Earth: Readings on Religion and the Environment* (Lanham, MD: Lexington Books, 2012), 1–2.

¹⁶⁶ Bauman, Bohannon, and O’Brien, “Introduction,” 7.

¹⁶⁷ Swoboda, “Tongues and Trees,” 45.

members of religiously-oriented constituencies and the distinctive (yet geographically and historically delimited) features of the socio-cultural *milieu*¹⁶⁸ in which they are deployed, performed and reproduced. Indeed, it is not surprising that the individual eco-actors who make every-day “decisions about how to treat other beings and one another” are inclined to dig, either consciously or unconsciously, into their own religious-spiritual and cultural background.¹⁶⁹

Thirdly, other scholars argue that, unlike secular ecological movements, a distinctive portion of eco-religious communities still draws on a peculiar cosmological approach according to which “nature” is “valuable *in itself* because it was made by God”, and not because of its intrinsic, autonomous and non-teleological relevance.¹⁷⁰ Indeed, as noted earlier (see Introduction to Part I), religious authorities — whenever they formally exist — have oftentimes embraced conservative-orthodox views on the human being’s ethical relationship with “nature”. In a nutshell, they have presumed that human beings are divinely entitled to play a dominant role as “exploitative” stewards of the Earth.¹⁷¹ Nevertheless, as Gottlieb and other scholars overtly put it,¹⁷² the most recent theologically-based scriptural reinterpretations of the three Abrahamic religions’ (Judaism, Christianity, and Islam) sacred texts and cosmological theories have called upon contemporary

¹⁶⁸ One could also take the term “socio-ecological”, which means “‘people in the environment’, where the environment is ‘the extended social field of directive correlations’, a social field within a shared natural environment”. See Fred Emery, *Futures we are in* (Leiden, the Netherlands: H. E. Stenfert Kroese B.V., 1977), 2; as cited in Merrelyn Emery, *Searching: The theory and practice of making cultural change* (Amsterdam, The Netherlands/Philadelphia, PA, USA: John Benjamins Publishing Company, 1999), 25.

¹⁶⁹ Bauman, Bohannon, and O’Brien, “Introduction,” 7.

¹⁷⁰ Francis Schaeffer, *Pollution and the Death of Man: The Christian View of Ecology* (Wheaton, IL: Tyndale House Publishers, 1970), 47; as cited in Johnston, *Religion and Sustainability*, 110.

¹⁷¹ Bauman, Bohannon, and O’Brien, “Introduction,” 7.

¹⁷² Gottlieb, *A Greener Faith*, 30.

believers to adopt a renewed moral respect and care towards all living/non-living, human/non-human beings. The more progressive scholarly views within this field tend to urge religious believers and their respective communities to take “nature” more seriously and responsibly than in the past. Although Nature is God’s Creation (i.e., a unique gift God has entrusted to humans, who in turn must act as good stewards of the Earth), “humans are also *earth*; they share their nature with its soil, its plants, its animals”.¹⁷³

Fourthly, contemporary scholars in this domain of research have also delved into the main environmental, socio-economic, and political consequences of the existing gap between the *institutionalised eco-religious worldviews* (which are based either on conventional or reformist religious cosmologies and theologies) and the so-called *lived ecological religions* and *lived ecological theologies*.¹⁷⁴ “Lived eco-faiths” are tremendously able to empower contemporary eco-believers, who actually tether their localised and quotidian “green” religious experiences to the broader transnational (and ecumenical) activist networks of the globalised social movements for sustainability. Additionally, as brilliantly pointed out by some eminent scholars,¹⁷⁵ *what people say* in light of their well-established eco-religious

¹⁷³ Wilkinson, Loren, ed., *Earthkeeping: Christian Stewardship of Natural Resources* (Grand Rapids: William B. Eerdmans Publishing, 1980), 208; as cited in Johnston, *Religion and Sustainability*, 112.

¹⁷⁴ As stated by Jay B. McDaniel, a living theology “does not arise in our lives simply through our believing particular things about the world or by holding particular worldviews. Rather, they emerge from experience itself, from the outside in from the inside out.” See Jay B. McDaniel, “Ecotheology and World Religions,” in *Ecospirit: Religions and Philosophies for the Earth* (New York: Fordham University Press, 2007), 30–1.

¹⁷⁵ See Bauman, Bohannon, and O’Brien, “Introduction,” 6. On the distinction between “*velleitas*” (“the wish that does not necessarily materialize in willing”) and “*voluntas*” (“the willing that manifests itself in action”), see also Dieter Birnbacher and May Thorseth, “Introduction,” in *The Politics of Sustainability: Philosophical Perspectives*, eds. Dieter Birnbacher and May Thorseth (Abingdon, Oxon; New York, NY: Routledge Studies in Sustainability, 2015), 3.

worldviews¹⁷⁶ may be distinct from *what people actually do* with their own religious and spiritual resources. In Celia Deane-Drummond's words, while the act of wonder at nature compels people to reaffirm religious devotion through stable rituals, *practical wisdom*¹⁷⁷ encourages people to act responsibly and appropriately in real-life situations.¹⁷⁸ For instance, recent research about so-called "eco-Islam"¹⁷⁹ (see Chapter 2) seems to show that the most successful Islamic ecotheological theories are the ones which are buttressed by the day-to-day, sustainability-oriented lives of ecologically-engaged groups of Muslims.

Finally, the study of "religion and ecology" suggests the need to reconsider *eco-justice* issues and problems¹⁸⁰ in any discussion about the relationship between religious credence and ecological thought. Throughout recent history, both religious figures and representatives of non-religious environmental movements (Christian liberation

¹⁷⁶ Here defined as ways either to make sense of reality or to understand the relationship between human beings and the natural world.

¹⁷⁷ "Practical wisdom", as stated by Celia Deane-Drummond, "understood in the classic Aristotelian sense as the ability to deliberate, judge and act aright not only between individuals, but also at the level of justice making, can apply to political as well as individual contexts". See Celia Deane-Drummond, "Public Theology as Contested Ground," 205.

¹⁷⁸ See Deane-Drummond and Bedford-Strohm, "Introduction," 3.

¹⁷⁹ For example, see Celia Daniel Nilsson DeHanas, "Broadcasting green: grassroots environmentalism on Muslim women's radio," *The Sociological Review* 57, Issue 2 (October 2009): 141 ff.; Arthur Saniotis, "Muslims and ecology: fostering Islamic environmental ethics," *Contemporary Islam* 6, Issue 2 (July 2012): 155 ff., accessed May 6, 2015, DOI 10.1007/s11562-011-0173-8; Jenkins et al., "Religion and Environment," 441 ff.; Schwencke, *Globalized Eco-Islam*, ch. 6; Mohamed, "Revitalising an Eco-Justice Ethic of Islam," ch. 1.

¹⁸⁰ Eco-justice is "a theological ideal that emphasizes the unity of environmental and social morality, assuming that other people and other creatures should be treated justly and that a singular moral stance toward both is possible". See Bauman, Bohannon, and O'Brien, eds., *Grounding Religion*, 230.

theologians¹⁸¹ together with secular eco-feminists, for example)¹⁸² have typically struggled against many deep-seated systems of social inequity and economic injustice.¹⁸³ It clearly seems that all religious concerns for protecting “nature” and natural habitats are pointless goals unless they are accompanied by concerns for: (a) the flourishing of all earthly beings; (b) the defence of the socially powerless, oppressed, vulnerable, and marginalised poor communities of the world. Both McMichael and Prugh et al.¹⁸⁴ warn us to consider eco-religiosity not only as an attempt to preserve certain features of the natural environment (e.g., wildlife, biodiversity,¹⁸⁵ watershed conservation and protection, etc.) but rather as a sweeping social movement concerned with socio-economic health and security. Indeed, among the main goals of eco-religions is affirming their ethical-moral power to re-orient and morally guide people in order to realise two fundamental values: *social justice* (i.e., the preferential option for the poor) and the so-called *minimisation of violence against*

¹⁸¹ Liberation theology is a Catholic theological movement that developed in the 1970s in Latin America. Founded by the Peruvian theologian and Dominican priest Gustavo Gutiérrez, it is a non-orthodox movement within the Catholic Church, because it combines European theologies with Marxism. On the historical roots of liberation theology, see Leonardo and Clodovis Boff, *Introducing Liberation Theology* (Maryknoll, N.Y.: Orbis Books, 1987).

¹⁸² “The term “ecofeminism” (or “ecological feminism”) was coined by Françoise d’Eaubonne in her book *Le féminisme ou la mort* (1974). The “ecofeminist movement” combines environmental activism with feminist theories. See Françoise d’Eaubonne, *Le féminisme ou la mort* (Paris: Pierre Horay, 1974).

¹⁸³ Michael S. Northcott, “Environmentalism,” in *The Encyclopedia of Politics and Religion: 2-volume Set*, ed. Robert Wuthnow, 237.

¹⁸⁴ See, for example, Anthony J. McMichael, *Planetary Overload: Global Environmental Change and the Health of the Human Species* (Cambridge, UK: Cambridge University Press, 1993); Thomas Prugh, Robert Costanza, and Herman Daly, *The Local Politics of Global Sustainability* (Washington, D.C.: Island Press, 2000), 1.

¹⁸⁵ On the spiritual implications of seeds and the human duty to preserve and protect biodiversity, as seen from the perspective of different religious and spiritual traditions, see, for example, a collection of essays published in 2014 under the title *Sacred Seeds: A Collection of Essays*, Introduction by Dr. Vandana Shiva, ed. The Global Peace Initiative of Women (GPIW) (Point Reyes Station, California, USA: The Golden Sufi Center, 2014).

nature.¹⁸⁶ The (re-)activation of this “eco-justice hermeneutics” — i.e., the elaboration of new strategies for interpreting both religious texts and interpretive traditions “from the perspective of Earth, by employing a set of eco-justice principles”¹⁸⁷ — might contribute to initiating an unprecedented phase in the “green history” of world religions.

The “religion and ecology” scholars, in essence, seem to contend that: (1) religion has always been shaped by the natural world and vice versa; (2) all the world’s religions potentially possess the moral-ethical and theological might to help people tackle the ecological damage generated by irresponsible human activities. Thus, these scholars try to investigate “how religion and/or the study of religion might positively impact the future of our species and our planet”.¹⁸⁸ The primary goal of these engaged scholars is to demonstrate that religions are still capable of educating and mobilising people in the fight against ecological degradation and global injustices. Some of them, for example, have presented illustrative cases of religiously-informed social movements for sustainability, a part of which is expanding globally. Religious theologian-environmentalists are therefore presented as the main actors involved “in the complex and controversial process of reinventing traditions to meet contemporary concerns”.¹⁸⁹ In one of his latest books (2013), Lucas F. Johnston came to the extreme conclusion that all social movements for sustainability are *inherently religious* or at least

¹⁸⁶ Heinrich Bedford-Strohm, “Public Theology of Ecology and Civil Society,” in *Religion and Ecology in the Public Sphere*, eds. Celia Deane-Drummond and Heinrich Bedford-Strohm (London: Continuum/ T & T Clark, 2011), 48–9.

¹⁸⁷ Norman Habel, “Earth Bible,” in *The Encyclopedia of Religion and Nature*, eds. Bron Taylor and Jeffrey Kaplan (London and New York: Thoemmes Continuum, 2005), 515, accessed May 6, 2015, <http://users.clas.ufl.edu/bron/ern/E.pdf>. These principles are not overtly religious and do not refer to God explicitly, but provide a basis for dialogue with a range of disciplines and religions on the way humanity has interpreted the Earth.

¹⁸⁸ Bauman, Bohannon, and O’Brien, “Introduction,” 8.

¹⁸⁹ Gottlieb, *This Sacred Earth*, 9.

spiritual.¹⁹⁰ Yet, it is still a moot point whether green religious movements can claim to be a crucial force in addressing the ecological challenges humans face at the present time.

1.3. Eco-religion and eco-theology

There is a prominent tendency among scholars in the field of “religion and ecology” to examine why and how the dynamic yet unstable relation between *human culture* (“religion”) and *nature*¹⁹¹ (“ecology”)¹⁹² has historically guided or even misguided people’s views, attitudes and behaviours toward the whole of humanity and the natural world. All human beings, as observed by Bauman et al., have always been inextricably interconnected with the Earth and its ecosystems.¹⁹³ Thus, given the interconnectedness of our planetary environment — as scientifically confirmed, for example, by post-Einsteinian physics and string theory¹⁹⁴ — the very presence of nonhuman lives and ecosystems is indeed crucial to the Earth’s balance and resilience. Human beings need to sustain themselves by interacting with the natural systems to which they belong, in which they live and on which they all depend; in other words, people both influence and are

¹⁹⁰ Johnston, *Religion and Sustainability*, 186.

¹⁹¹ “Nature” can be defined as “a complex concept with several highly contested meanings. For example, Murray Bookchin points out that because many aboriginal people’s lives are so integrated with it, words that mean what we call ‘Nature’, are not easy to find, if they exist at all, in their languages”. See Murray Bookchin, *Environmental Philosophy: From Animal Rights to Radical Ecology*, ed. M.E. Zimmerman (Englewood Cliffs, NJ: Prentice Hall, 1993); as cited in “The Green Fuse”, last modified July 2015, <http://www.thegreenfuse.org/glossary.htm>.

¹⁹² “Ecology: Originally the scientific study of the relationship between living organisms and their environment. The term now has a wider range of meanings. Often used to describe the holistic interconnectedness of all existence on Earth”. See “The Green Fuse”, last modified July 2015, <http://www.thegreenfuse.org/glossary.htm>.

¹⁹³ Bauman, Bohannon, and O’Brien, “Introduction,” 1.

¹⁹⁴ Swoboda, “Tongues and Trees,” 38. On Gaia theory, see, e.g., James Lovelock, *Gaia: A New Look at Life on Earth* (New York: Oxford University Press, 1979); and idem, *The Ages of Gaia: A Biography of Our Living Earth* (New York: W. W. Norton & Company, 1988); *Homage to Gaia: The Life of an Independent Scientist* (London: Oxford University Press, 2000).

influenced by “nature”. On the other hand, it is also quite apparent that — while ensuring the continuity of life over time and across generations — human beings have been increasingly proven to be responsible for the despoliation of these complex and fragile systems.¹⁹⁵ They have failed to recognise their embeddedness in and interdependence with “nature” and one another.¹⁹⁶

However, as anticipated in the previous paragraphs, within the traditional realm of religious studies and theology,¹⁹⁷ there are religious ethicists and theologians who have been suspected of not having completely discarded some anthropocentric, apologetic and eschatological views about the natural environment and its importance to human beings.¹⁹⁸ At the end of the 1960s, the Medieval historian Lynn White Jr. published the famous lecture he had delivered on 26 December 1966 to the Association of the American Academy of Science as an essay entitled “The Historical Roots of Our Ecological Crisis” (1967).¹⁹⁹ In his acclaimed (yet harshly criticised) article, which appeared in the academic journal *Science*, he levelled a critique of the global ecological decline precipitated by Western technological civilisation under the influence of the “Judeo-Christian” (*viz.*

¹⁹⁵ Bauman, Bohannon, and O’Brien, “Introduction,” 1.

¹⁹⁶ Gottlieb, *This Sacred Earth*, 12. Nowadays, the tree-huggers’ ‘elitist’ dream of nature being pristine, unspoiled, untainted and wild nature is at risk. Nevertheless, in many places of the world we assist in the creation of ecological associations and ENGOs that provide concrete remedies for the destruction of ecosystems and biotic communities (e.g., local campaigns for collecting and storing indigenous seeds in ‘seed banks’ in opposition to the global agricultural biotechnology market).

¹⁹⁷ Following Richard C. Foltz’s line of argument, “religions are only one component (though often a major one) of any individual’s or any society’s overall worldview and the resultant value system that influences individual and group attitudes and decisions”. See Foltz, ed., *Worldviews, Religion and the Environment*, xv.

¹⁹⁸ See Lawrence Troster, “What is Eco-Theology?” *Cross Currents* 63, Issue 4 (18 December 2013): 381, accessed May 7, 2016, DOI 10.1111/cros.12043; Wesley Granberg-Michaelson, *Ecology and Life: Accepting Our Environmental Responsibility* (Waco: Word Books, 1988).

¹⁹⁹ Lynn White Jr., “The Historical Roots of Our Ecological Crisis,” in Lynn White Jr., *Machina Ex Deo: Essays in the Dynamism of Western Culture* (Cambridge, Mass.: MIT Press, 1968), 75–94.

Abrahamic) tradition.²⁰⁰ In a nutshell, White’s thesis (see par. 1.1) — which at that time raised a long and intense discussion among philosophers,²⁰¹ theologians, historians, and sociologists — blames the Church Fathers and the Hebrew Bible itself (notably, the Book of Genesis) for upholding an anthropocentric view²⁰² and its corollary, i.e. the belief in human superiority over his/her natural surroundings. Indeed, this anthropocentric attitude is deemed to be the main determinant of human indifference, and at worst hostility, towards non-human organisms, as well as of human overexploitation and seizure on nature.²⁰³ According to White, the traditional idea of a transcendent,

²⁰⁰ For more on this point, see, for example, Bron Taylor, “The Greening of Religion Hypothesis (Part One),” n.p.

²⁰¹ For example, see Arnold Toynbee’s 1972 essay on the religious origin of the global ecological problems. Arnold Toynbee, “The Religious Background of the Present Environmental Crisis: A Viewpoint,” 141 ff.; see also Sian Reid, ed., *Between the Worlds: Readings in Contemporary Neopaganism* (Toronto, ON, Canada: Canadian Scholars Press, 2006), 33–8.

²⁰² The term “anthropocentrism” means human-centredness (etymologically, it comes from the Greek word *ánthrōpos* (“man”) and the Latin word for “centre”, (*centrum*), i.e. “treating humans needs as if they were the primary or the only considerations to be taken into account”. See Foltz, ed., *Worldviews, Religion, and the Environment*, 430. As stated by Alasdair Cochrane, anthropocentric environmental ethics follows an ethical framework according to which humanity takes a central role in our moral universe: “all the direct moral obligations we possess, including those we have with regard to the environment, are owed to our fellow human beings”. See Alasdair Cochrane, “Environmental Ethics,” in *Internet Encyclopedia of Philosophy (IEP)*, eds. James Fieser and Bradley Dowden, accessed May, 8, 2016, <http://www.iep.utm.edu/envi-eth/>. There are three major categories of anthropocentric concepts: interest-based, epistemological, and cosmological. Anthropocentric views may: (a) prioritise human interests over the interests of other-than-human beings or entities; as a result, the latter’s interests are not considered as morally important or, alternatively, are viewed as irrelevant compared to human interests (*interest anthropocentrism*); (b) maintain that moral values are essentially a product of our human mind. Hence, humans have *only* access to knowledge about human subjects: “the values of other-than-human entities never come from beyond the human world, or at least [...] humans have no way of knowing such values. Values come not from nature or from God, but from valuing human subjects” (*epistemological anthropocentrism*); (c) claim that humans play a pivotal role in grasping the sense of the universe; since the human figure is placed at the centre of this cosmological order and balance, one can see “the teleological trajectory of nonhuman processes” reflected in a sort of human “microcosm” (*cosmological anthropocentrism*). See Jenkins, “Anthropocentrism,” 22–3.

²⁰³ Genesis 1:27–8 states: “God created man in his own image, in the image of God created he him; male and female created he them. And God blessed them, and God

supernatural God-Creator of a “quasi-Promethean” being called “man” (note the explicitly gendered connotation) in His image (*imago Dei*) and the theological belief in the human-centredness of the cosmos have both legitimised and opened the way for the human subjugation and disrespect for the non-human world.²⁰⁴ He also averred that Biblical scholars have erroneously (a) stuck both to Cartesian dualistic/hierarchical modes of thinking and to similarly dichotomist views, such as the separation of spirit/matter, mind/body, culture/nature; (b) clung to a deistic viewpoint that reinforces the “ontological divide between humans and the rest of life” at the expense of “nature”, whose intrinsic value and independent dignity are thus denied.²⁰⁵

Until very recently, as pointed out by L. Shannon Jung, the stewardship ethic²⁰⁶ of the Judaeo-Christian tradition had been accused

said unto them, Be fruitful, and multiply, and replenish the earth, and subdue it: and have dominion over fish of the sea, and over fowl of the air, and over every living thing that moveth upon the Earth”. Likewise, Thomas Aquinas in *Summa Contra Gentiles* (Bk. 3, Pt. 2, Ch. 112) argues that non-human animals are “ordered to man’s use”. See Brennan and Lo, “Environmental Ethics,” in *The Stanford Encyclopedia of Philosophy*, 3. On this point, see also Taylor, “The Greening of Religion Hypothesis (Part One),” n.p.

²⁰⁴ It has been shown that this anthropocentric view has been endorsed by a vast array of religious people all around the world, and especially by the most ‘environmentally-unfriendly’ ultraconservative, fundamentalist, and reactionary strains of Christianity, Hebraism, and Islam. On this point, see Toynbee, “The Religious Background of the Present Environmental Crisis,” 141 ff. As stated by Aaron Jason Swoboda, “Toynbee’s argument suggests that as monotheism rose as a prominent form of religious life in human communities, worship of nature (i.e. paganism) eventually became marginalised as a sort of competition to strict monotheism. Toynbee’s thesis concludes that once nature had been, in essence, ‘desacralised’, monotheists were free to do as they chose with the natural world and abuse it in oppressive ways”. See Swoboda, “Tongues and Trees,” 15, note 18. White’s and Toynbee’s essays were later reprinted in *Ecology and Religion in History*, eds. David Spring and Eileen Spring (New York: Harper and Row, 1974), 15–31; and 137–49. My citations immediately above are taken from the book *Judaism and Environmental Ethics: A Reader*, ed. Martin D. Yaffe (Lanham, MD: Lexington Books, 2001), 65.

²⁰⁵ See Troster, “What is Eco-Theology?” 381.

²⁰⁶ “Environmental stewardship is a concept and commitment of responsibility to manage and protect natural resources (water, air, land, plants and animals) and ecosystems in a sustainable manner that ensures they are available for future generations”. See California Natural Resources Agency, Environmental Stewardship,

of having deliberately desacralised “nature” for individualistic-utilitarian purposes, thanks to its enduring alliance with modern Western science and technology.²⁰⁷ In his interesting paper published in 2013, the Jewish eco-theologian and environmental leader Lawrence Troster further noted that the current apologetic responses to religious environmentalism are uniquely concerned with rejecting all the preceding accusations meant to debase the ecological essence of religion.²⁰⁸ Not surprisingly, some religious “apologists” assert that (a) the eco-friendly wisdom, knowledge, and way of life instructed by longstanding religious traditions have always been in place throughout their own historical and cultural development; (b) these religious

Department of Water Resources Policy Paper, October 29, 2010, accessed May 7, 2015, <http://www.water.ca.gov/cvfmp/docs/EnvStewardshipPolicy.pdf>.

As stated by L. Shannon Jung, “the stewardship ethic has claimed that God created the world good, that human beings are responsible for its care, and thus that human beings are accountable to God as stewards. At the outset, then, men and women are differentiated from nonhuman nature and told to ‘subdue and dominate’ as well as to ‘till and keep’ the Earth. The stewardship ethic is basically hierarchical: the rest of creation is acknowledged as the sphere over which human beings serve as stewards. With this implicit model of human beings as superior to nature, the upshot is that, if there is a conflict between the interests of people and the land, then the nonhuman counts for little more than zero in the equation. Nature finally is for the benefit of humans, and the only reason for its care and conservation is its utility for future (human) generations”. See L. Shannon Jung, “The Recovery of the Land: Agribusiness and Creation-Centered Stewardship,” in *Religion and the Life of the Nation: American Recoveries*, ed. Rowland A. Sherrill (Urbana: University of Illinois Press, 1990), 118.

²⁰⁷ Still, L. Shannon Jung maintains that the current resurgence of some heterodox views within Christianity — namely, St. Francis’ worldview and Franciscanism as a spiritual movement may offer a new remedy for the current ecological crisis. St. Francis of Assisi, who is the patron saint of modern Christian ecology, in his *Praises of the Creatures* (also called “The Canticle of the Sun”) talks of “Brother Son and Sister Moon”. See L. Shannon Jung, “The Recovery of the Land”, 118. See also Gottlieb, *A Greener Faith*, 8; and Lynn White Jr., “The Historical Roots,” 1206–7. Further, Giner and Tábara (1999) state that “the feeling and practice of a ‘cosmic piety’ constitute a large-scale emotional, mystic and, often, pseudo-scientific attempt by Western societies to grasp the ultimate meaning of most relationships between human existence, the natural world and the universe”. Thus, they seem to contend that ‘cosmic piety’ traces back to Saint Francis of Assisi and to “the Galilean defence of the Copernican astronomical system”. See Giner and Tábara “Cosmic Piety and Ecological Rationality,” 66–7.

²⁰⁸ See Troster, “What is Eco-Theology?” 381.

traditions are able to comply *in toto* with a modern ecological ethos; (c) if people of faith had literally followed these religious teachings and commands, the current ecological crisis would not have occurred at all.²⁰⁹ Hence, the followers of this apologetic model advocate an uncritical and automatic retrieval of timeless eco-religious virtues, regardless, for example, of the new scientific understanding of climatic and biological/ecological phenomena.

Moreover, eschatological positions are considered as even more ambiguous and problematic than apologetic theologies:

These models often logically conclude that if creation will ultimately be destroyed at the *eschaton*, ecological efforts will be inherently fruitless. Models such as this seemingly prepare the *eschaton* with an apocalyptic ecological ethic that gives no, or little, regard to earth care.²¹⁰

This is exactly the reason why deep ecologists (and similar non-theist groups that oppose “shallow” ecological movements)²¹¹ point the finger at mainstream monotheistic religions and their traditionalist-orthodox *eco-theologies*, which are regarded as part of the sustainability problem rather than acting as a palliative for it.

However, on the opposite side of the fence, freshly constructed types of *eco-theology* (the shortened form of *ecological theology*) have boosted a new theology of the Earth and a revamped eco-ethical paradigm. Indeed, today we assist in the emergence of an embryonic eco-theology.²¹² The latter is a social and spiritual movement that

²⁰⁹ See Peter Beyer, “Who Shall Speak for the Environment? Translating Religious, Scientific, Economic, and Political Regimes of Power and Knowledge in a Globalized Society,” in *Religion and Ecology in the Public Sphere*, eds. Celia Deane-Drummond and Heinrich Bedford-Strohm (London: Continuum/T & T Clark, 2011), 26.

²¹⁰ Swoboda, “Tongues and Trees,” 17.

²¹¹ For a detailed history of “Deep ecology”, see, for example, Brennan and Lo, “Environmental Ethics,” in *The Stanford Encyclopedia of Philosophy*, 6 ff.; see also Næss, “The Shallow and the Deep,” 95 ff.; and Max Weber’s Protestant ethic thesis. See Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, trans. Talcott Parsons (New York: Charles Scribner & Sons, 1958 [1904–1905]).

²¹² See Deane-Drummond and Bedford-Strohm, “Introduction,” 4.

promotes a respectful concern for human/non-human beings and for the Earth itself.²¹³ Hence, eco-theology is a response to the unsustainable human squandering of the Earth's resources.²¹⁴ As perfectly put by McDaniel, "we might call eco-theology *the web-of-life movement* insofar as it takes the well-being of life as a whole — rather than ever-increasing economic growth — as the central organizing principle of its social vision".²¹⁵ Behind the patchy framework of these eco-theological movements, however, eco-theology can be referred to as "a study of the intersections between theological ideals and environmental issues".²¹⁶ By anchoring themselves to definite ecological worldviews, contemporary eco-theological perspectives are typically aimed at: (1) accommodating religious doctrines and ethical traditions within the ecological preoccupations of our present epoch; (2) energising religious believers' ecological awareness, ethical responsibility, and committed action, which is needed "especially within the context of a brittle secular democracy menaced by the convergence of neoliberal economics with theocratic anti-liberalism".²¹⁷

For example, as remarked on by Jung, the Christian thinkers who are steering toward a newly-established form of Creation-based spirituality essentially claim that "creation is ongoing in all nature, that God is not absent from her world, and that the earth is indeed the Lord's".²¹⁸ More generally, the advocates of *Creation theology* seem to opt for a deliberate re-orientation toward both ecological and techno-

²¹³ Ecotheology first became visible as a rejoinder to and refutation of White's criticism of the Judaeo-Christian theology as the main party responsible for the Earth's ecological crisis. On the origins and post-industrial types of ecotheology, see McDaniel, "Ecotheology and World Religions," 21 ff.

²¹⁴ Munteanu, "Public Theology," 162.

²¹⁵ McDaniel, "Ecotheology and World Religions," 22.

²¹⁶ Bauman, Bohannon, and O'Brien, eds., *Grounding Religion*, 230.

²¹⁷ Kearns and Keller, *Ecospirit*, xii.

²¹⁸ See Jung, "The Recovery of the Land", 122; and Beyer, "Who Shall Speak for the Environment?" 28.

scientific issues. Their theological horizon envisions a worldview based on the belief that: (a) Nature was not created by humanity but by a Creator (God); indeed, He “both commanded and empowered human beings to be responsible stewards over Creation” and to keep and take care of the environment;²¹⁹ (b) human beings ought not to consider themselves to be ontologically superior to the rest of God’s Creation, because humanity is “co-responsible for the integrity of creation”.²²⁰ Thus, according to Creation theologians, the endorsement of deviant religious interpretations of the *human dominion over nature*²²¹ — which have been taken up by capitalist-technological endeavours and the modern market economy to provide restrictive benefits — is regarded as an irresponsible sin.²²²

Furthermore, some religious scholars have developed *justice-focused approaches* to eco-theology. Contemporary eco-theology, as argued by Gottlieb, actually “moves from reforming religious traditions

²¹⁹ Kenman L. Wong and Scott B. Rae, *Business for the Common Good. A Christian Vision for the Marketplace* (Downers Grove: IVP Academic, 2011), 48.

²²⁰ Beyer, “Who Shall Speak for the Environment?” 28.

²²¹ In the Biblical texts, it is referred to as the “dominium terrae”, i.e., the religious command to “subdue the Earth” (Gen. 1.28).

²²² Beyer, “Who Shall Speak for the Environment?” 26. As explained by Swoboda, “[...] in the Roman Catholic [...] tradition, Matthew Fox, Thomas Berry, Teilhard de Chardin, and Karl Rahner have each reframed a robust ecological conversation that has a profound value in developing care for Creation in a late modern setting. Similarly, in the Orthodox tradition, the Patriarch Bartholomew and Paulos Gregorios are reimagining ecotheology. Protestants, through such theologians as Paul Santmire, Steven Bouma-Prediger, and Jürgen Moltmann, have produced afresh a Protestant green theology. And finally, the ecofeminist advance has readied an ecological response through Sallie McFague, Elizabeth Johnson, and Rosemary Ruether, to name a few”. See Swoboda, “Tongues and Trees,” 18–9. In a relatively recent book (2004), Roger S. Gottlieb quoted the well-known 1997 pronouncement by Bartholomew: “To commit a crime against the natural world is a sin...to cause species to become extinct and to destroy the biological diversity of God’s creation...to degrade the integrity of the Earth by causing changes in its climate, stripping the Earth of its natural forests, or destroying its wetlands...to contaminate the Earth’s waters, its land, its air, and its life with poisonous substances — these are sins”. Address of His Holiness Ecumenical patriarch Bartholomew at the Environmental Symposium, Santa Barbara, CA, November 8, 1997”. See Gottlieb, *This Sacred Earth*, 229–30. See also John Grim and Mary Evelyn Tucker, “Intellectual and Organizational Foundations,” 90.

to challenging beliefs and institutions throughout society as a whole”.²²³

In short, eco-theology inevitably moves toward “eco-justice”:

“[...] a prophetic vision of a social order in which both nature and people are treated with respect and care. When it takes the form of eco-justice, ecotheology overlaps with secular environmentalism and progressive political movements generally. If ecojustice is ultimately rooted in a vision of the Sermon on the Mount or God’s command ‘Justice, justice shall you pursue’ (*Deut.* 16:20; *Qur’an* 16:90), many of its goals are indistinguishable from those of the Sierra Club, neighborhood activist, or antiglobalization protestors at the World Social Forum”.²²⁴

In parallel with the diffusion of these eco-theologies, unconventional forms of religious environmentalism have made room for a more praxis-centered spirituality.²²⁵ Interestingly, most religious eco-activists pay particular attention to *eco-justice* issues. They make explicit the fact that the socio-economic injustices toward the poor people of the Global South (or toward other socially excluded individuals and discriminated groups) and global environmental injustices are two distinct yet related manifestations of the same planetary problem; as a consequence, they claim that the simultaneous redress and repair of these two forms of injustice is in fact necessary to solve the ecological problems of our world.²²⁶

Overall, the “eco-creativity” that has recently animated these nonconformist types of religious thought makes it worth raising again the more general question as to whether religious and/or spiritually-derived “worlds of meaning” (i.e., worldviews) can substantially inspire religious believers to: (a) be more committed to the well-being

²²³ Gottlieb, *A Greener Faith*, 45.

²²⁴ *Ibid.* In the next chapter (Chapter 2), I will present, albeit perfunctorily, the Islamic eco-theological doctrine and its most innovative aspects. The eco-justice concerns, intentions, and purposes of some progressive eco-Muslims presuppose and include the recognition that environmental injustices go hand in hand with social and economic injustices. Perhaps unsurprisingly, this position is echoed in a number of secular environmentalist arguments. See Gottlieb, *A Greener Faith*, 10.

²²⁵ Jung, “The Recovery of the Land,” in *Religion and the Life of the Nation*, 120.

²²⁶ Beyer, “Who Shall Speak for the Environment?” 28.

of the planet Earth; and (b) face the ecological threats — to the natural world, to the future generations of all living and non-living creatures and to the larger planetary systems — caused by unsustainable human activities. If the world’s explicitly religious institutions and theological organisations were inclined, for example, to see global climate change’s disastrous effects as proof of profound human moral corruption and alienation from Creation, would they really be prepared to constructively and critically respond to the current ecological crisis?²²⁷ As prompted by Bauman et al.,²²⁸ contemporary religious authorities, and especially eco-theologians, may be asked to choose among three main options: (1) *recovering* some inherited religious doctrines and value-sets; (2) *reforming* existent religious traditions; (3) *creating* groundbreaking symbolic systems and/or *inventing* “better-fitting” (inter-)religious ideals.²²⁹ Several authors correctly pointed out that contemporary ecological challenges have generated demands for more fluid and responsive religious traditions.²³⁰ Indeed, this concerted push for furthering religious transformation has in part been expressed through (1) an intra-religious debate concerning the *re-appropriation/recovery* of inherited traditions by “finding and stressing passages in classic texts that help us face the current crisis”;²³¹ (2) a

²²⁷ The Arabic word *hay’ a* (“dignified reserve”), as Nawal H. Ammar tells us, is “the orientation of action in progressive Islam toward averting the ecological doom”. See Nawal H. Ammar, “An Islamic Response to the Manifest Ecological Crisis: Issues of Justice,” in *Worldviews, Religion, and the Environment: A Global Anthology*, ed. Richard C. Foltz (Australia; Belmont, CA: Thomson/Wadsworth Publishing, 2003), 377–8. See also Bauman, Bohannon, and O’Brien, “Religion,” 25.

²²⁸ See Bauman, Bohannon, and O’Brien, “Ecology,” 60–1.

²²⁹ With regard to point (3), “absorbing the wisdom of others” might be another appropriate strategy to creatively innovate a given faith tradition. See Kaveh L. Afrasiabi, “Toward an Islamic Ecotheology,” *Hamdard Islamicus* 18, no. 1 (1995): 33–50. Reprinted in *Worldviews, Religion, and the Environment: A Global Anthology*, ed. Richard C. Foltz (Australia; Belmont, CA: Thomson/Wadsworth Publishing, 2003), 371.

²³⁰ Gottlieb, *A Greener Faith*; ch. 1; Bauman, Bohannon, and O’Brien, “Introduction,” 1 ff.; Johnston, *Religion and Sustainability*, 18–24.

²³¹ Gottlieb, *A Greener Faith*, 10.

radical *reform* of religious traditions; (3) an *extension* of some familiar ethical beliefs (e.g., love, respect) and virtues (admiration, wonder, simplicity, farsightedness) to nonhumans; (4) a creative *replacement* of old traditions with new ideas, practices, institutions and organisations;²³² (5) an ecumenical *synthesis* of different religious traditions.²³³

Although eco-religiosity has conformed, in varying degrees, to all the patterns listed above, any public religious commitment to eco-theology entails serious acceptance of *renewal*. This amounts to saying that, if people of faith really want to be the engine of religious change, either in the national societies in which they live or in global society, their anti-dogmatic and anti-fundamentalist positions stand in need of revitalisation. The main protagonists of this ongoing process of reshaping the available religious traditions are not only the leaders and official representatives of organised religions but also priests, seminarists, lay preachers, and ordinary eco-believers.²³⁴ This ecotheological and ecospiritual revolution²³⁵ may serve the global common good, provided that it could prick human conscience and spur the population into action for sustainability's sake. It also seems to me that, at the grassroots level, some avant-garde, religiously-inspired environmentalist movements are steadily converging toward modern

²³² For example, Taylor's work on "dark green religions". See Taylor, *Dark Green Religion*, ch. 2.

²³³ Gottlieb, *A Greener Faith*, 10.

²³⁴ "Eco-believers" (or "ecological believers") can be defined as religious people who are deeply concerned with ecological issues.

²³⁵ The term "eco-spirituality" can be defined as "a spiritual view of, and context for, human relationships with the Universe and the Earth. It has the potential to transcend boundaries between spiritual traditions and also between science and spirituality". See "Eco-Spirituality," Glossary, in Bas Verschuuren et al., *Sacred Natural Sites: Conserving Nature and Culture* (London, UK, and Washington D.C., USA: Earthscan, 2010), xxv.

scientific ecologists and secular environmentalist movements, at least in terms of general objectives and action strategies.

1.4. Religious change and public theology

As suggested in the previous paragraph, the study of contemporary eco-theological thinking presupposes a careful investigation of *religious change* dynamics.²³⁶ First and foremost, religions (as well as worldviews) have to change. They are neither static nor ahistorical systems; they contingently unfold their broad range of “meaning-making practices, institutions, rituals, belief systems, sacred texts, moral norms, taboos, and even philosophical reflection upon religion as a whole”.²³⁷ Consequently, religious dimensions can be easily found in many moral structures and spiritual systems that have nothing to do with organised religions; contrariwise, some approaches to “traditional knowledge” do not leave any religious trace along their historical evolution.²³⁸

Second, religions are not intrinsically monolithic.²³⁹ Religious traditions have been continually animated by the highly variable coexistence of different interpretative frameworks, in a continuum ranging from pure orthodoxy to reformist currents. To put it simply, religions have always been flexible and subject to continuous change throughout their own historical evolution.²⁴⁰ For example, religious structures and institutions may be inclined to support their adherents’ spiritual transformation when the supposed consistency between a

²³⁶ Religious change may induce people either to achieve a “moral awakening” or to cultivate a sense of commonality for the sake of sustainability.

²³⁷ Bauman, Bohannon, and O’Brien, “Religion,” 14.

²³⁸ Ibid.

²³⁹ Religions, as noted by Roger S. Gottlieb, are “systems of belief, ritual, institutional life, spiritual aspiration, and ethical orientation which are premised on an understanding of human beings as *other* or *more than simply* their purely social or physical identities”. See Gottlieb, *This Sacred Earth*, 8.

²⁴⁰ Tucker and Grim, “Intellectual and Organizational Foundations,” 91–2.

community's worldview ("conceptions of a general order of existence") and ethos ("powerful, pervasive, and long-lasting moods and motivations") fails to morally respond to current quandaries.²⁴¹

Third, religions do bear normative relevance since they have a profound impact upon people's worldviews, which are subject to change via further perceptions and experiences. Thus, one may also appraise whether and how the available theological visions of the natural world — whose ethical dimensions may be imbued with a sense of holism — can be employed (or transformed) for the purpose of leading religious communities to a shared and sustaining pattern of life.²⁴² Moreover, an accurate understanding of these ideal processes of adaptation cannot disavow the investigation of the different positions held by specific eco-religious actors in the local, national, regional, international, and transnational social arenas.²⁴³

Last, religions can offer a general order of existence. As Rodney Petersen commented, they "provide the premises for equity or social justice" and support an ethic of personal and interpersonal socio-ecological care.²⁴⁴ This is to say that contemporary eco-theologies could not only help people reflect on the great moral issues raised by this ever-

²⁴¹ See Bauman, Bohannon, and O'Brien, "Religion," 18.

²⁴² See Ronald A. Simkins, ed., "Religion and the Environment," *Journal of Religion and Society*, Supplement Series 3 (2008): 47 ff.

²⁴³ My methodological perspective slightly differs from a purely constructivist approach to the study of religions. In my opinion, social constructivist views tend to put too much emphasis on localism and moral relativism. Yet, it is worth recalling the Geertzian definition of religion as "a system of socially-constructed symbols that, at a certain moment, starts to become central in a given culture". See Clifford Geertz, *The Interpretation of Cultures: Selected Essays* (New York: Basic Books, 1973), 90.

²⁴⁴ See Rodney L. Petersen, "Religion and the Quest for Equity in Consumption, Population, and Sustainability," *Bulletin of Science, Technology & Society* 19, no. 3 (June 1999): 199, accessed February 3, 2016, DOI 10.1177/027046769901900303.

worsening ecocrisis, but could also boost socio-economic justice, especially in the most vulnerable societies of the world.²⁴⁵

To sum up, religious imagination, for better or for worse, is collectively reorienting people to “nature” in our pluralistic and multi-faith societies. Roger Gottlieb — who is one of the leading figures in contemporary Christian environmentalism — maintains, for example, that non-repressive, “liberal” religious languages and ideas are socially powerful because they morally instruct and offer comfort, support and hope to both individuals and communities. People are thus encouraged to spiritually process their misconduct and moral errors.²⁴⁶ Clearly, the profound global challenge posed by the current ecological crisis is an opportunity to (re-)activate the reformist and non-status quoist spiritual forces contained in the world’s mainstream religions, including their respective theological traditions. Indeed, religious values and beliefs are potentially able to rouse human energies; and all religious experiences, if properly channelled, may help people “green” themselves.²⁴⁷ For Gottlieb, a rigorous focus on “accounts of God, ultimate meaning, human responsibility, and ethical life” is the key to a better understanding of how ecological concerns have been integrated within religious horizons, and vice versa.²⁴⁸

However, all processes of ecotheological reflection have as a precondition the rethinking of religion’s place in the global “green” public domain. The role of religious morality in the public sphere, as Bauman et al. have cautiously pointed out,²⁴⁹ remains a vexed issue

²⁴⁵ See Simkins, ed., “Religion and the Environment,” 62. See also Gary Gardner, *Inspiring Progress: Religions’ Contributions to Sustainable Development* (New York and London: W.W. Norton & Co., 2006), ch. 10.

²⁴⁶ Gottlieb, *A Greener Faith*, 12.

²⁴⁷ *Ibid.*

²⁴⁸ Gottlieb, *A Greener Faith*, 19. See also Paul Tillich, *Theology of Culture*, ed. Robert C. Kimball (New York: Oxford University Press, 1964), 9.

²⁴⁹ Bauman, Bohannon, and O’Brien, “Introduction,” 1.

insofar as the mounting threats of militant terrorism (e.g., ISIS-Daesh and other radical Islamist and jihadist movements) and violent fundamentalism continue to exist at the core of global politics.²⁵⁰ Nonetheless, he would not recommend keeping eco-religions (and their respective public eco-theologies) out of the public life of the community of believers/society. In his view, religion is not just a “private matter of personal faith”.²⁵¹ In this respect, the reader may also agree with Gottlieb²⁵² when he avows that the religious theologian-environmentalists’ *religious reasons*, which rest on comprehensive views on “sensitive matters” such as the meaning of existence, the purpose of human life, the proper standards of moral conduct, etc. are neither more nor less rational, publicly relevant and authoritative than non-religious environmentalists’ *secular reasons*.²⁵³ That being the case, religion may be allowed to make a contribution to public debate.²⁵⁴ To further explain his point, Gottlieb argues that the religious contributions to several human rights struggles (“ending slavery, promoting racial equality, resisting dictatorship, supporting the rights of the poor”) are illustrative of the historically important role played by some religiously-inspired social movements in extending liberal-

²⁵⁰ At the same time, however, a vast array of religious individuals and communities feel publicly attacked, excluded or marginalised from public social life either because of restrictive public policies or generalised discriminatory acts. On this point, see Gottlieb, *A Greener Faith*, 58.

²⁵¹ Gottlieb, *This Sacred Earth*, 11.

²⁵² Gottlieb, *A Greener Faith*, 68–9.

²⁵³ Thus, I would argue that: (1) all general attempts at forging a shared morality and “green” collective virtues within the Earth community should legitimately include the precious contributions of eco-believers; (2) the establishment of transnational cooperation or broad coalitions among different groups of eco-activists, both religious and secular, might be a forward-looking remedy to global sustainability problems. See also Johnston, *Religion and Sustainability*, 2–3.

²⁵⁴ See Deane-Drummond and Bedford-Strohm, “Introduction,” 9. On the concept of “public reason” and the Rawlsian proviso, see John Rawls, “The Idea of Public Reason Revisited,” in *Collected Papers*, ed. Samuel Freeman (Cambridge, MA: Harvard University Press, 1999), ch. 26; and Sebastiano Maffettone, *Rawls: An Introduction* (Cambridge, UK; Malden, MA, USA: Polity Press, 2010), ch. 11.

democracy and human rights and in promoting justice through the (unexpected) activation of deliberative and participatory democratic experiences and practices. He mentions Gandhi, Martin Luther King Jr., the Latin American liberation theologians, Desmond Tutu, and Aung San Suu Kyi as clear examples of universally-recognised personalities who successfully managed to combine religion, social action, and moral teachings.²⁵⁵ However, Gottlieb, along with other ecologically-minded scholars, concedes that some religiously-based anthropocentric ideas have legitimated Western interests and disguised forms of neo-colonialism and neo-imperialism, both reinforced by Western-style economic and political systems. Nevertheless, his critique of the current authoritarian, patriarchal and hierarchical social systems, including the “oppressive self-righteousness” of radical religious conservatism,²⁵⁶ has stirred people of faith into a substantial reinterpretation of their own traditional views with regard to ecological matters. For instance, *ecumenical eco-theology* — which is aimed at fostering networks of ecumenical theological institutions around the world — is getting resonance in public interfaith discussions about global sustainability problems (e.g., climate change) and their potential solutions. Another important approach, which is actually linked to *ecumenical eco-theology*, is *public theology*. In the words of Dean-Drummond and Bedford-Strohm, public theology is the “translation of theology into concepts meaningful in public discourse”. Further, the two authors highlight that it “applies to the explicitly political and policy realm, as well as to public debate as such”.²⁵⁷

²⁵⁵ See Gottlieb, “Introduction: Religion and Ecology,” 8; and idem, *A Greener Faith*, 49 and 65.

²⁵⁶ Gottlieb, *A Greener Faith*, 183.

²⁵⁷ See Deane-Drummond and Bedford-Strohm, “Introduction,” 4.

This ‘eco-religious renaissance’ occurs at a time when the design of a new eco-theology and its ethical guidance in global political decision-making has really revealed itself to be a matter of human survival in the face of an imminent ecological disaster.²⁵⁸ Invariably, contemporary eco-theologians mostly retain the accomplishments of (liberal-)democracy and engage in a critical dialogue with philosophers and academic/professional experts in other disciplines (botanists, biologists, cosmologists, astronomers, demographers, etc.).²⁵⁹ Still, they call for a “greening of modernity”, i.e. a process of reconciliation between nature and humankind.²⁶⁰ Besides, these eco-thinkers: (a) sacralise the scientific discourse in order to bring it into the central ecological debates of our time; (b) use modern scientific language as a “communicative tool” to assist them not only in tracing out God’s presence in the complex and interdependent essence of the whole universe but also to persuade “all people of good will” of the desirability of a reverential respect for “nature” as a central part of human duties and responsibilities on Earth.²⁶¹

In fact, the foundation of a public eco-theology is the continuation of a process initiated in the 1970s by a handful of progressive religious environmentalists and committed eco-theologians. At that time, those intellectuals and scholars fiercely opposed the ecological unconcern that had characterised some of the most influential religious traditions, including their own.²⁶² In the current era of ecological disruption and

²⁵⁸ See Deane-Drummond and Bedford-Strohm, “Introduction,” 2.

²⁵⁹ See, for example, Thomas Berry, *The Dream of the Earth* (San Francisco, CA: Sierra Club Books, 1988); as cited in Bedford-Strohm, “Public Theology of Ecology and Civil Society,” 47–8.

²⁶⁰ See Ulrich Beck, “Climate for Change, or how to create a green modernity?” *Theory, Culture and Society* 27, no. 2–3 (2010): 254; as cited in Deane-Drummond and Bedford-Strohm, “Introduction,” 6.

²⁶¹ See Gottlieb, *A Greener Faith*, 38.

²⁶² As stated by Celia Deane-Drummond and Heinrich Bedford-Strohm in a recent book (2011), “conferences given by institutions such as the World Council of

socio-economic inequalities, eco-theology may thus offer an interesting clue to understand how present-day eco-believers benefit from a given set of religious and spiritual assets. These “theological-academic laboratories” are willing to enrich ecological theories with fresh spiritual ideas about how to proactively and positively respond to these ghastly and pernicious acts of ‘biocide’ and socio-ecological harm.²⁶³ Additionally, the main representatives of several religious and spiritual communities across the globe are increasingly aware of (1) the relationship between a culture of unwise and addictive individual *consumerism* and a greed-driven, wanton capitalism; and (2) the danger of a backward and alienating *religious, political, and economic fundamentalism*, which ought to be urgently called into question.²⁶⁴

1.5. Eco-faiths in the international debate on sustainability

Since the second post-war period (1960s-1970s), eco-religious insights have informed theological discussions and ethical debates about sustainability issues in the United States and Europe, from where they have spread to other parts of the world. The popular term “sustainability”, as noted by Willis Jenkins,²⁶⁵ was extensively used within established religious contexts before being explicitly adopted in (non-religious) specialised international fora. The World Council of Churches (WCC) (<https://www.oikoumene.org/en/>) was one of the first

Churches (WCC) reflected ecological challenges much earlier than others. In 1970s the WCC dealt with these questions at a conference in Geneva between 28th June-4th July, initiating a study process under the title ‘The Future of Humanity and Society in a World of Science-Based Technology, having already reflected on ecological challenges. The first widely publicized document of ecological awareness was the Report to the Club of Rome on the ‘Limits to Growth’ in 1973’. Deane-Drummond and Bedford-Strohm, “Introduction,” 2.

²⁶³ See Gottlieb, *A Greener Faith*, 21.

²⁶⁴ On this point see, for example, McDaniel, “Ecotheology and World Religions,” 31–2.

²⁶⁵ Willis Jenkins, “Sustainability,” in *Grounding Religion: A Field Guide to the Study of Religion and Ecology*, eds. Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O’Brien (New York: Routledge, 2011), 98–9.

international Christian organisations dealing not only with matters of Creation care and pro-poor liberation theologies but also with “sustainability” as a morally and socially relevant concept. In 1966 the WCC embarked on a five-year study program focused on the impact of technology on society and environmental integrity. That ecumenical project opened the way to sustainability-oriented religious efforts to establish a “socially equitable and ecological responsible global community”.²⁶⁶ Consequently, the Catholic Church started to raise its public voice by scrutinising social problems in relation to developmental and ecological issues. In his 1971 social encyclical *Octogesima Adveniens*, Pope Paul VI, after having commemorated the social encyclicals of his predecessors,²⁶⁷ invited all the faithful to partake in the socio-environmental challenges facing the entire human community and to take responsibility for the limitless and irrational overexploitation of nature. He specifically stated that the idea of development could not be reduced to economic growth and that an authentic development had to foster “the development of each man and of the whole man”.²⁶⁸ Further, in a recent essay which appeared in *La Civiltà Cattolica*, it was boldly stated that “Saint John Paul II was the first pope to talk about the consequences of industrial growth, massive urban concentrations and vastly increased energy needs. Many years later, it was Pope Benedict XVI who spoke about the growing

²⁶⁶ Johnston, *Religion and Sustainability*, 55.

²⁶⁷ In his Apostolic letter, Paul VI refers to Leo XIII’s Encyclical *Rerum Novarum* (1891), Pius XI’s Encyclical *Quadragesimo Anno* (1931), Pius XII’s radio message to the world, and to John XXIII’s two encyclicals, *Mater et Magistra* (1961) and *Pacem in Terris* (1963). See *La Civiltà Cattolica*, “Protecting the Whole of Creation. A service that the Bishop of Rome is called to carry out,” *La Civiltà Cattolica II* (2015): 537, accessed February 7, 2016, http://www.laciviltacattolica.it/articoli_download/extra/Editorial-ENG.pdf.

²⁶⁸ Pope Paul VI, *Populorum Progressio*, Encyclical of Pope Paul VI on the Development of Peoples, March 26, 1967, accessed February 7, 2016, http://w2.vatican.va/content/paul-vi/en/encyclicals/documents/hf_p-vi_enc_26031967_populorum.html.

ecological awareness in those years before the German Federal Parliament”²⁶⁹.

However, within the UN context, the 1972 UN Conference on the Human Environment (UNCHE) (also known as the Stockholm Conference) can be considered the culmination of a constructive process started in 1968, when the United Nations convened the Economic and Social Council (ECOSOC). In the face of the global environmental crisis, the Council adopted resolution 1346 (XLV), recommending the UN General Assembly to hold a UN Conference dedicated to sustainability problems.²⁷⁰ The Stockholm meeting resulted in the Stockholm Declaration on the Human Environment, which reframed the previous discussions on *sustainable development*. The Declaration emphasised, for example, the correlation between extreme poverty conditions — especially evident among the most vulnerable people living in developing countries — and environmental risks; the importance of water, air, flora and fauna as indispensable natural resources; and the need for inter- and intra-generational equity.²⁷¹ The conference reflected a growing global interest in recognising the finite nature of the Earth’s resources and in addressing the roles and responsibilities of humankind in safeguarding them for both present and future generations.²⁷² In response to the Stockholm conference, the UN General Assembly established the United Nations Environment Programme (UNEP) on 15th December 1972. UNEP, which is the main UN environmental agency, established its headquarters in Nairobi, Kenya.²⁷³ In 1980, the International Union for the Conservation of

²⁶⁹ La Civiltà Cattolica, “Protecting the Whole of Creation,” 538.

²⁷⁰ Johnston, *Religion and Sustainability*, 55–6.

²⁷¹ Ibid. See also Maxwell T. Boykoff, ed., *The Politics of Climate Change: A Survey* (London: Routledge, 2010), 249.

²⁷² Jenkins, “Sustainability,” 98.

²⁷³ Among the outcomes of the Rio+20 Conference (i.e., the short name for the United Nations Conference on Sustainable Development, which took place in Rio de Janeiro,

Nature (IUCN) (<http://www.iucn.org/>) published a noteworthy report on environmental management. It actually dismissed the mid-1800s economic formulation of “sustainability” and “sustainable resource use” in terms of harvests and yields,²⁷⁴ thus opening the way to an extended notion of “sustainability”.²⁷⁵ Another milestone publication in this respect was the 1972 *Limits of Growth* report released by the Club of Rome. Although Donella Meadows and her co-authors did not explicitly mention the word “sustainability”, they successfully problematised the concept of “sustainability” by pointing to the inconsistency between the idea of ecological limits²⁷⁶ and the current economic models of growth. The global awareness of ecological limits, as rightly observed by Johnston, increased after the publication of Garret Hardin’s essays *The Tragedy of the Commons* (1968) and *Living on a Lifeboat* (1974). In addition to these two essays, Johnston referred to Paul Ehrlich’s book *The Population Bomb* (1968) and to William

Brazil, in June 2012), there was a UN General Assembly resolution that approved the upgrading and strengthening of UNEP. See Achim Steiner, “Making history,” Reflections, *Our Planet Magazine*, UNEP, accessed September 6, 2016, <http://www.unep.org/OurPlanet/2013/feb/EN/reflections.asp>.

²⁷⁴ “The roots of the concept [sustainability, *editor’s note*] lie in traditional hunting practices and the implicit rule to cull no more animals from a given population than is allowed by keeping the stock constant”. Birnbacher and Thorseth, “Introduction,” 1.

²⁷⁵ Lucas F. Johnston classified the existing definitions of sustainability by dividing them into *development-related*, *counter-hegemonic* and *scientific* definitions. See Johnston, *Religion and Sustainability*, 10–1.

²⁷⁶ In the last half of the 1800s, cognates of the term “sustainability” (i.e., ecological limits and management of natural resources) started to become diffused in Europe. While Thomas Malthus’ (1766–1834) theory connects the idea of ecological limits to population growth, the British Luddites movement struggled against the ideas of unlimited technological progress and prosperity which spread during the early Industrial Revolution. See Johnston, *Religion and Sustainability*, ch. 4, and 43 ff. for a detailed literature on ecological limits and the ethics of scarcity. The so-called “ethics of scarcity” is tethered to the idea of ecological limits. Indeed, this notion entered the European managerial debate in the early-mid 1700s, when the increased overexploitation of natural resources paved the way for the elaboration of resource management models and forest management systems. These approaches were later (early 1900s) adopted by North American Transcendentalists (Emerson, Thoreau, Muir and preservationists), who founded the opposition of utilitarian thinkers and “conservationist” management philosophers (Gifford Pinchot, for example).

Ophuls' work *Ecology and the Politics of Scarcity* (1977). He argued that, unlike Hardin, Ophuls developed the theme of scarcity by relying on an anti-liberal-democratic model of ecological politics; basically, Ophuls maintained that a "green dictatorship" could be the only political system capable of (a) authoritatively enforcing both ecological norms and policies; (b) coercively containing ecological degradation; and (c) limiting the subsequent social unrest.²⁷⁷

Looking back at the Christian contributions to social development issues, Johnston recalled the mediating role of WCC in dealing with the socio-developmental struggles of traditional and indigenous peoples in the Global South. In 1971, the WCC convened a meeting in Barbados as part of its long-term "Program to Combat Racism" (PCR). The list of attendees included social scientists preoccupied with the persistent isolation and unjust disempowerment of the under-developed nations of the "Fourth World" from decisions taken in the dominant global political and economic arenas. The Barbados Declaration, which was issued as a result of that meeting, was followed by a second Barbados Conference (1977). Unlike Barbados I, Barbados II involved indigenous eco-activists, who temporarily managed to put more pressure on international political bodies. In the early 1970s, the Third-World post-colonial countries worked at the "Declaration on the Establishment of the New International Economic Order (NIEO). Promulgated as a UN declaration in 1974, that document set up an agenda of transnational reforms by advocating a radical restructuring of the international political and economic governance systems. However, the proposals made by developing countries, which had in fact received scarce or no attention, were not implemented.²⁷⁸ The apparent stalemate

²⁷⁷ See Johnston, *Religion and Sustainability*, 57.

²⁷⁸ See Johnston, *Religion and Sustainability*, 58–9; see also Lucas F. Johnston and Todd LeVasseur, "Indigenous and Traditional Resource Management," in *Berkshire*

and failure of the NIEO prompted the Global North to set down a counterproposal. Robert Strange McNamara, the fifth President of the World Bank Group (1968-1981), urged the former chancellor of the federal Republic of Germany Willy Brandt to chair a Commission that would assess, reconsider and somehow challenge the developed/developing countries divide and its related problems. In 1977, Brandt formed the Independent Commission on International Development Issues, the so-called Brandt Commission. The Commission issued several recommendations and published two reports (*North-South: A Program for Survival*, 1980; *Co-operation for World Recovery*, 1983); yet, it did not create an international environment conducive to the achievement of genuine forms of cooperative action for just, equitable, and sustainable development at a global level.²⁷⁹

Moreover, given the fact that “wars and armed conflicts are some of the most ecologically and socially devastating activities in which humans engage”, as explained by Johnston, the concept of “sustainability” has a lot to do with global security issues (e.g., nuclear disarmament, weapon control systems).²⁸⁰ In the context of a widespread international concern about the Cold War logic of East-West competition and hostility, the Palme Commission, so-called because it was chaired by the Swedish former Prime Minister Olof Palme (1927-1986), published a 180-page *Report on Disarmament and Security*. The Palme Commission was able to put forward the new concept of common security (which appeared to be a valid alternative to nuclear deterrence) and to promote the idea of mutual interest among

Encyclopedia of Sustainability, vol. 4, *Natural Resources and Sustainability*, ed. Daniel Vasey et al. (Great Barrington, MA: Berkshire Publishing Group, 2012), 232–3.

²⁷⁹ Johnston, *Religion and Sustainability*, 59–60.

²⁸⁰ Johnston, *Religion and Sustainability*, 61.

states in avoiding a global nuclear crisis. Similarly, the Brundtland Commission produced its final report, *Our Common Future* (1987), best known as the “Brundtland Report”. Named after the former Norwegian Prime Minister Gro Harlem Brundtland (b. 1939), who, at that time, was chairing the World Commission on Environment and Development (WCED), the Brundtland report actually set up the international framework for the ensuing UN-led international conferences, negotiations and agreements on environmental, development and sustainability issues.²⁸¹ The WCED publication, which is one of the most cited and widely recognised international documents in discussions concerning the issue of development and sustainable development,²⁸² introduced a developmental definition of “sustainability” (“sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs”).²⁸³ The Brundtland definition of “sustainability”, which offered a lucid account of the normative dimensions of sustainability by looking at the complex structure of the global environmental-economic governance, was seen as an attempt to reconcile the mainstream capitalist models of economic growth adopted by the affluent North with the environmental and socio-economic concerns of developing countries (with specific attention given to the poorest countries of the Global South).²⁸⁴

²⁸¹ Namely, the “Earth Summit” in Rio de Janeiro (1992); the World Summit on Sustainable Development (WSSD) in Johannesburg (2002); the United Nations Sustainable Development Summit (2015).

²⁸² Johnston, *Religion and Sustainability*, 61.

²⁸³ World Commission on Environment and Development (WCED), “Our Common Future, Chapter 2: Towards Sustainable Development,” WCED, 1987, accessed May 7, 2015, <https://sustainabledevelopment.un.org/milestones/wced>.

²⁸⁴ The WCED’s definition of sustainable development, as George Randal Davies (2013) boldly explains, “is subsumed under four main aspects: 1) Holistic planning and strategy making; 2) Preservation of ecological processes; 3) Protection of heritage and biodiversity; 4) Development that can be sustained for future years. (From WCED, 1987)”. See George Randal Davies, “Appraising Weak and Strong

Still, *Our Common Future* was not free from criticism. Given the ambiguities of the concept of “sustainable development”, the extent of its use was and still remains unclear and contestable. Even in current times, some critics contend that the term “sustainable development” is so widely used in international language that it has become vague, clichéd, and meaningless. Some contemporary scholars argue, instead, that the concept of “sustainable development” is simply an oxymoron because the historically specific conditions of European/Western development have never been sustainable, neither for the environment nor for general human progress. Consequently, in their view, “sustainable development” is just an international “green label” used not only by national governments, but also by global companies and businesses with the aim of deceiving people while continuing to plunder the Earth’s resources with impunity. Other eco-centric scholars affirm that there is a need for a stronger notion of sustainability. In their view, the idea of “strong sustainability” is underpinned by the assumption that it is not possible to sacrifice our ecological basis for survival (i.e., the natural environment) for short-term economic gains and technological advancements.²⁸⁵ Citing Dasgupta,²⁸⁶ Davies contends that “strong sustainability implies carrying on to the next generation the same amount of natural capital, with human capital increases over time; whereas weak sustainability implies a declining natural capital over

Sustainability: Searching for a Middle Ground,” *Consilience: The Journal of Sustainable Development* 10, Issue 1 (2013): 112, accessed May 18, 2016, <http://www.consiliencejournal.org/index.php/consilience/article/viewFile/288/157>.

²⁸⁵ From an economic perspective, as stated by George Randal Davies, “the strong sustainability paradigm states that natural capital cannot be substituted by man-made capital”. For a detailed analysis and comparison between “weak” and “strong” sustainability, which may lead to the discovery of a middle pathway, see Davies, “Appraising Weak and Strong Sustainability,” 113.

²⁸⁶ See Partha Dasgupta, *Human Well-being and the Natural Environment* (Oxford: Oxford University Press, 2004); and idem, “Measuring Sustainable Development: Theory and Application,” *Asian Development Review*, 24, no. 1 (2007): 1–10.

time while human capital increases”.²⁸⁷ Besides, these scholars reject the technocentric/anthropocentric approaches to sustainability, according to which there is a trade-off between the three pillars of “sustainable development” — i.e., the ecological/environmental, economic/capital and social equity/justice dimensions of sustainability.²⁸⁸

Even so, the political visibility and success gained by sustainable development discourses at the international level stimulated (at least in the past and within a small group of countries), interesting, yet conflicting, outcomes. In 1988, UNESCO published a work entitled *Man Belongs to the Earth* (1988),²⁸⁹ which evoked the famous “biocentric” speech given by the nineteenth-century Native American Chief Seattle in 1854.²⁹⁰ Furthermore, as explained by Johnston, the Brundtland debate around sustainability opened the way for the June 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, Brazil, which produced the Rio Declaration and Agenda 21. The so-called “Earth Summit” smoothed the path toward (a) the creation of the United Nations Framework Convention on Climate Change (UNFCCC) and the 1997 Kyoto Protocol, which entered into force on 16 February 2005; (b) the Convention on Biodiversity (CBD); and (c) the Declaration on Forest Principles. Ten years later, the city of Johannesburg hosted the World Summit on Sustainable Development (2002).²⁹¹

²⁸⁷ Davies, “Appraising Weak and Strong Sustainability,” 114.

²⁸⁸ Johnston, *Religion and Sustainability*, 24.

²⁸⁹ United Nations Organization for Education, Science and Culture (UNESCO), “Man Belongs to the Earth,” UNESCO’s Man and the Biosphere Programme (Fleurus, Belgium: Imprimerie Bietlot Frères, UNESCO, 1988), accessed March 8, 2016, <http://unesdoc.unesco.org/images/0008/000806/080638eo.pdf>.

²⁹⁰ See Johnston, *Religion and Sustainability*, 63.

²⁹¹ Johnston, *Religion and Sustainability*, 67.

In the mid-1990s, the *Parliament of World's Religions* (CPWR), endorsed a *Declaration Toward a Global Ethic* (1995).²⁹² While a global interfaith movement was starting to flourish, as stated by Jenkins, Brundtland “also helped set in motion an extensive cross-cultural and interfaith initiative that led to the Earth Charter”.²⁹³ The Earth Charter is an international declaration about the fundamental ethical values and principles the entire humanity (“the peoples of Earth”, as affirmed in its Preamble)²⁹⁴ is asked to endorse in order to create the global sustainable society of the twenty-first century.²⁹⁵ Finalised by the Earth Charter Commission at a UNESCO meeting held in Paris and formally launched in 2000 at the Peace Palace in The Hague, this official document (which consists of a Preamble and sixteen ethical principles) marked the culmination of a highly collaborative and cross-cultural drafting process that had lasted ten years. The Earth Charter was indeed the result of a global initiative that had involved a plurality of actors (e.g., NGOs, professional societies, international experts, representatives of the world’s religions),²⁹⁶ which eventually managed to reach a general consensus on the idea of sustainable development and its ethical-spiritual and socio-economic/environmental effects. Although it first emerged as a UN-sponsored (WCED) project, the draft of the Charter, especially since

²⁹² Parliament of the World’s Religions, accessed September 5, 2015, <https://www.parliamentofreligions.org/>. See also Schwencke, *Globalized Eco-Islam*, 33.

²⁹³ Jenkins, “Sustainability,” 99.

²⁹⁴ See The Earth Charter Initiative, “The Earth Charter: Preamble,” accessed October 6, 2015, <http://earthcharter.org/discover/the-earth-charter>.

²⁹⁵ See Bron Taylor, “A Green Future for Religion?” 998.

²⁹⁶ See Jay McDaniel, “Ecotheology and World Religions,” 27.

1994-1997, had included a large number of proposals coming from several representatives of global civil society.²⁹⁷

Still, both religious and spiritual voices had begun to ostensibly enter the sustainability discourse even before the Earth Charter was published. By 2000, the main religious-spiritual authorities (e.g., the Dalai Lama)²⁹⁸ and heads of Churches (Roman Catholic, Orthodox, Anglican, Episcopal) had released their committed statements and sermons on eco-theology and sustainability issues.²⁹⁹ In Europe, the Alliance of Religions and Conservation (ARC)³⁰⁰ founded in 1995 by HRH Prince Philip after the Assisi Conference (1986)³⁰¹ — which he attended as the President of the World Wildlife Fund (WWF) International — gained (and still has) a prominent role in England and abroad (<http://www.arcworld.org/>). Since 1998, Interfaith Power and Light (IPL), which is a coalition of US-networked Episcopal congregations now led by the Rev. Canon Sally G. Bingham, had started to elaborate a religious response to global warming through the

²⁹⁷ See Steven Rockefeller, “Earth Charter,” in *Berkshire Encyclopedia of Sustainability*, vol. 1, *The Spirit of Sustainability*, ed. Willis Jenkins (Great Barrington, MA: Berkshire Publishing Group, 2010), 115–7.

²⁹⁸ See, e.g., Dalai Lama, “Environment: His Holiness the Dalai Lama’s speeches and messages on the environment,” *His Holiness The 14th Dalai Lama of Tibet*, accessed May 7, 2016, <http://www.dalailama.com/messages/environment>.

²⁹⁹ See Washington Theological Consortium, “Ecology and the Churches. Official Statements and Resources for Study,” June 2015, accessed May 18, 2016, <http://washtheocon.org/wp-content/uploads/2012/12/Ecology-and-the-Churches-2015-FINAL-for-website1.pdf>.

³⁰⁰ See “Faiths & Ecology,” ARC, accessed July 6, 2015, http://www.arcworld.org/arc_and_the_faiths.asp. For a general overview of the joint programmes on faith and nature conservation that have been developed by ARC in collaboration with WWF, the World Bank and other international organisations (*Faiths and Conservation Programs*, for example), see Schwencke, *Globalized Eco-Islam*, 23–6.

³⁰¹ The *Muslim Declaration on Nature* (1986), which was issued by the Muslim World League, was released at the end of the Assisi meeting. See “The Muslim Declaration on Nature - Assisi 1986,” *Alliance of Religions and Conservation (ARC)*, accessed July 6, 2015, <http://www.arcworld.org/faiths.asp?pageID=132>. See also “Islamic Faith Statement,” *Alliance of Religions and Conservation (ARC)*, accessed July 7, 2015, <http://www.arcworld.org/faiths.asp?pageID=75>; and Schwencke, *Globalized Eco-Islam*, 16.

promotion of energy conservation, energy efficiency, and renewable energy campaigns, along with interfaith educational and sustainable agriculture/farming projects.³⁰² In the United States, noteworthy progress was made in this respect in the early 1990s. In 1990, a group of over thirty scientists signed *An Open Letter to the Religious Community*, seeking to integrate people of faith into the global movement for sustainability. In 1992, religious leaders and scientists issued their *Declaration of the Mission to Washington to the Joint Appeal by Religion and Science for the Environment*, wherein they expressed their joint commitment to protecting the environment and respecting nature in all its forms.³⁰³ More recently, though, the official declarations made by some religious leaders, calling for the end of the current “ecological nightmare”, have drawn popular attention to the most difficult challenges and obstacles posed by unsustainable economic growth and, above all, by climate change. In September 2014, the World Council of Churches and Religions for Peace organised an *Interfaith Summit on Climate Change* ahead of the Climate Summit 2014.³⁰⁴ Thirty religious authorities gathered in New York for this Interfaith Summit (21st–22nd September 2014), calling on the UN climate negotiators and policy-makers to pay more attention to the interfaith and faith communities’ concerns and proposals about climate change. They eventually adopted a Statement, which was signed by several religious leaders and spiritual authorities representing Christian, Jewish, Muslim, Hindu, Buddhist, Indigenous, and other belief systems.³⁰⁵

³⁰² See, for example, the Interfaith Power & Light’s official website; accessed May 7, 2015, <http://www.interfaithpowerandlight.org>.

³⁰³ See Johnston, *Religion and Sustainability*, 64–8.

³⁰⁴ On the 23 September 2014, the Secretary-General of the United Nations Ban Ki-moon organised a Climate Summit in New York.

³⁰⁵ The Statement “is directed to heads of states, international negotiators and faith communities, and was presented to the UN Secretary General”. See Interfaith Summit

The voice of the Holy See within the United Nations is becoming even stronger. Pope Francis' unique 192-page encyclical letter on ecological issues *Laudato Si'* ("Praise Be to You: On Care for our Common Home") reflected the Vatican's hope to inspire decisive action on climate change and other ecological issues.³⁰⁶ It was officially published on 18th June 2015 to impact on not only the Church's flock, but also the UN climate summit in Paris (COP-21).³⁰⁷ This important manifestation of eco-Christianity clearly shows the increasing influence of eco-religions on highly-institutionalised international contexts. On 23rd June 2015, the Lutheran World Federation (LWF), a communion of Lutheran churches that spans across ninety-eight countries, announced its governing Council's decision not to invest in fossil fuels companies. LWF officially presented its new policy, which is mainly aimed at funding energy efficiency and renewable energy projects, "as part of its long-standing commitment to climate justice".³⁰⁸ Further, the recently-launched *Lambeth Declaration 2015 on Climate Change*³⁰⁹ enjoined British faith communities to mobilise for climate action by urging them to support a sustained global transition to a low carbon economy.

on Climate Change, "About the Summit," World Council of Churches (WCC), last modified 2014, accessed May 9, 2015, <http://interfaithclimate.org/about-the-summit>.

³⁰⁶ The Cardinal Jorge Mario Bergoglio, who was elected Pope in March 2013, took the name Francis in reference to St. Francis of Assisi. St. Francis was canonised as the Patron Saint of ecologists by Pope John Paul II in 1979.

³⁰⁷ The twenty-first session of the Conference of the Parties (COP-21) to the United Nations Framework Convention on Climate Change (UNFCCC) was held in Paris from 30 November to 12 December 2015. The twenty-second session (COP-22) will be held in Bab Ighli, Marrakech (Morocco) from 7 November to 18 November 2016. See United Nations Framework Convention on Climate Change (UNFCCC), "Marrakech Conference. Information Hub," UNFCCC, accessed October 19, 2016, <http://newsroom.unfccc.int/cop22marrakechinformationhub/>.

³⁰⁸ Ekklesia: Transforming politics and belief, "Lutheran World Federation announces decision not to invest in fossil fuels," *Ekklesia Daily Bulletin*, London-Edinburgh, June 23, 2015, accessed July 1, 2015, <http://www.ekkleisia.co.uk/node/21822>.

³⁰⁹ This document was signed the day before the papal encyclical; it was officially released by the Archbishops of Canterbury and York and other faith leaders in the UK.

Likewise, Muslim scholars and religious leaders paid heed to the Paris Climate Summit. In mid-August, a group of distinguished international Islamic scholars and religious leaders from twenty countries convened at the International Islamic Climate Change Symposium (Istanbul, 17th-18th August). The Symposium was arranged by a small group of NGOs (Islamic Relief Worldwide, GreenFaith, IFEES and a secular international body, the Climate Action Network) in collaboration with three distinguished Islamic organisations: the Organization of Islamic Cooperation (OIC, formerly the Organization of the Islamic Conference), the International Islamic Fiqh Academy (IIFA) and the Islamic Educational, Scientific and Cultural Organization (ISESCO). Among its main partisans, there were illustrious religious figures such as the Grand Muftis of Lebanon and Uganda and the chair of the Indonesian Council of *'Ulamā'* ("Islamic jurists"). The *Islamic Declaration on Global Climate Change* was issued as the final document of the two-day Symposium.³¹⁰ The sixty participants to the summit drew up and adopted an eight-page document written in English and Turkish, which is an "eco-Islamic Manifesto" (see Ch. 2) that marks the new global ambitions of the current "eco-Islamic" movement.³¹¹

In a short article which appeared in *Thinking Faith*, which is the online journal of the Jesuits in Britain, Damian Howard SJ stated that the Islamic Declaration targeted the Paris conference negotiators by recommending that they reach a binding agreement on climate at the 2015 Paris Climate Conference (COP-21). He also argued that the

³¹⁰ "Islamic Declaration on Global Climate Change," International Islamic Climate Change Symposium, Istanbul, Turkey, August 17th-18th, 2015, accessed May 7, 2016, <http://islamicclimatedeclaration.org/islamic-declaration-on-global-climate-change/>.

³¹¹ See Damian Howard S.J., "An Islamic Declaration on Climate Change," *Thinking Faith*, October 29, 2015, accessed March 4, 2016, https://www.thinkingfaith.org/articles/islamic-declaration-climate-change#_edn15.

Declaration: (a) points the finger of blame at the inertia of the rich countries, which instead ought to get poor people out of the woods by taking on the financial burden of phasing out fossil fuels; (b) calls on the people of all nations, who are invited to give up fossil fuels to the advantage of renewable energy sources; (c) envisions a new ethical model for ecological action; (d) targets global corporations, finance, and business sectors, soliciting them to take responsibility for their own profit-oriented actions in the light of the unsustainable economic system whose generation they have contributed to.³¹² Cardinal Peter Turkson, President of the Pontifical Council for Justice and Peace (Vatican City), expressed his admiration for the Islamic environmentalist initiative; he praised its success, convinced that all that Islamic environmentalists have done to combat climate change would buoy people up to “care for our common home and thus to glorify the God who created us”.³¹³ The three official documents quickly resonated across the globe in prevision of the UNFCCC climate negotiations that were expected to end with a new international climate change agreement.

Afterwards, the United Nations summit for the adoption of the post-2015 development agenda (Sustainable Development Goals, SDGs) was convened at the UN headquarters in New York (25–27 September 2015) as a high-level 70th Session of the United Nations General Assembly (UNGA).³¹⁴ Pope Francis addressed the UNGA on Friday 25 September, the day after his historical visit to the Joint

³¹² Ibid.

³¹³ See “Cardinal Turkson: All faiths must work together on ecological crisis,” *Vatican Radio*, August 17, 2015, accessed June 6, 2016, http://en.radiovaticana.va/news/2015/08/17/cardinal_turkson_all_faiths_must_work_together_on_ecology/1165624.

³¹⁴ See, e.g., Prime Minister of Bangladesh Sheikh Hasina on terrorism and climate change. Sheikh Hasina Wajed, Speech given at the 70th Session of the United Nations General Assembly (UNGA), accessed May 19, 2016, <https://www.youtube.com/watch?v=N8ptUpCo6zk>.

Session of the US Congress in Washington D.C.;³¹⁵ his speech was a call for the ban of nuclear weapons, the reaffirmation of “a true right of the environment” and the realisation of eco-justice at a global level.³¹⁶ In the general framework of COP-21, it is also worth mentioning the *Buddhist Climate Change Statement to World Leaders 2015*, and the *Hindu Declaration on Climate Change 2015*.³¹⁷

³¹⁵ See Pope Francis, “Address of the Holy Father,” Visit to the Joint Session of the United States Congress, United States Capitol, Washington, D.C., September 24, 2015, accessed May 9, 2016, http://w2.vatican.va/content/francesco/en/speeches/2015/september/documents/papa-francesco_20150924_usa-us-congress.html.

³¹⁶ See Pope Francis, “Address of the Holy Father,” Meeting with the Members of the General Assembly of the United Nations Organization, United Nations Headquarters, New York, September 25, 2015, accessed May 9, 2016, http://w2.vatican.va/content/francesco/en/speeches/2015/september/documents/papa-francesco_20150925_onu-visita.html.

³¹⁷ See Global Buddhist Climate Change Collective (GBCCC), *Buddhist Climate Change Statement to World Leaders 2015*, October 29, 2015, accessed May 8, 2015, <https://gbccc.org/buddhist-climate-change-statement-to-world-leaders-2015/>; see also The Oxford Centre for Hindu Studies/Bhumi Project et al., *Bhumi Devi ki Jai! A Hindu Declaration on Climate Change*, November 23, 2015, <http://www.hinduclimatedeclaration2015.org/english>.

Concluding remarks

The hope of the current eco-theological movement, as stated by McDaniel, is that people coming from different places and cultures of the world can “develop communities that are just, sustainable, participatory, nonviolent, and compassionate”.³¹⁸ Insofar as people of faith are likely to recognise, endorse and re-ground their moral/religious precepts and theological principles, they may increase their ecological awareness, which in turn could help them mobilise for sustainability and actively respond to the impending ecological crisis. Yet, these religious norms of behaviour and practice — as Scheffler (2010) has rightly observed — “require interpretation if they are to provide any concrete guidance about how to live. Most traditions do not limit themselves to endorsing some set of values and principles, but also provide useful guidance about their implementation and application”.³¹⁹

As we will see in the next chapter (cf. Ch. 2), this is as true of Islam as it is of other religions and non-theistic eco-philosophies. Islam is a practical religion, that is, a complete way of life. Islam comprises a large variety of religious-spiritual traditions and theological-juridical approaches. Further, the Islamic multi-layered moral heritage offers to its followers a body of advice and a set of meticulous, comprehensive instructions about how to interpret its well-entrenched values, ideals and principles. Islam also specifies how to apply, implement and practically experience them in real-life situations.³²⁰ Nevertheless, the

³¹⁸ McDaniel, “Ecotheology and World Religions,” 27.

³¹⁹ Samuel Scheffler, “The Normativity of Tradition,” in *Equality and Tradition: Questions of Value in Moral and Political Theory* (New York: Oxford University Press, 2010), 292.

³²⁰ See Philip Wilkinson, *Eyewitness Companions: Religions*, eds. Marek Walisiewicz et al. (London: Dorling Kindersley Ltd., 2008), 134. For example, in addition to the moral exhortations, rules and regulations of Shariah (*Sharī‘ah*) — which are in part derived from the interpretation of the bulk of the Islamic doctrine, notably the Quran (*Qur’ān*) and the prophetic Sunnah (*Sunnah*) — there is a body of *fiqh* (“Islamic jurisprudence”) and a sophisticated Islamic legal theory (*Uṣūl al-fiqh*). The latter has

Islamic tradition, no more than other religious and spiritual traditions, can persist and evolve so long as it strikes a balance between continuity and discontinuity/change.³²¹ In our specific case, change is dictated by the urgent global need to reduce the pernicious effects of the present ecological crisis.³²² Keeping this in mind, it is worth investigating how contemporary Muslims have actually interiorised their own ecological values and to what extent they have enacted the Islamic eco-theological and eco-spiritual views in real-life individual and collective circumstances. In order to do so, it is necessary to examine the “eco-narratives” originally conceived by the Islamic tradition itself. A preliminary identification and determination of these “symbolic-spiritual worlds” may help us understand how Islam and its adherents have differently interpreted the relationship between humans and God and between humanity and nature. Most importantly, this awareness may also assist us in discerning how this web of relationships has historically developed into Islamic civilisation within different political, socio-economic, and cultural settings.

developed according to the methodological traditions and juridical instruments (e.g., *qiyās*, “analogical reasoning”; *ijtihād*, “independent reasoning”; *ijmāʿ*, “scholarly consensus”) of the Sunni/Shiʿi *madhāhib* (“juridical schools”). As a result, juristic opinions may vary (*ikhtilāf*) from a legal school to another. See Nisrine Abiad, *Sharia, Muslim States and International Human Rights Treaty Obligations* (London: British Institute of International and Comparative Law, 2008), xviii. On the concept of *ijmāʿ*, see Shaykh Muhammad I-Ghazali, *Within the Boundaries of Islam. A Study on Bidʿah*, transl. Aslam Farouk-Alli (Kuala Lumpur: Islamic Book Trust, 2010).

³²¹ In Samuel Scheffler’s words, “a tradition is a set of beliefs, customs, teachings, values, practices, and procedures that is transmitted from generation to generation”. On the normative force of tradition and “traditional reasons”, see Samuel Scheffler, *The Normativity of Tradition*, in *Equality and Tradition*, Oxford, 2010.

³²² It is important to notice, however, that religious innovation is a delicate and tricky process within Islam. The Islamic jurisprudence introduced the notion of unlawful (*Sharīʿa* non-compliant) novelty — *bidʿah*, “reprehensible innovation”, an error and misguidance that distorts the real message of Islam.

2. The rise of “eco-Islam”

Assuredly the creation Of the heavens And the earth Is a greater (matter)
Than the creation of men Yet most people understand not.³²³

Do ye then feel secure That He will not cause you To be swallowed up
Beneath the earth When ye are on land, Or that He will not send Against
you a violent tornado (With showers of stones) So that ye shall find No
one to carry out Your affairs for you? Or [...] A heavy gale to draw you
Because of your ingratitude [...].³²⁴

Religions (including the Abrahamic family of religions), along with less formalised forms of religiosity — as Mary Evelyn Tucker and John Grim have pointed out — can be key shapers of people’s (ecological) worldviews.³²⁵ As anticipated in the previous chapter, the mainstream world religions, Islam included, have responded to the current crisis by either recovering traditional ecological knowledge and practices or by elaborating newfangled eco-ethical and eco-theological views. In the Islamic context, this distinctive phenomenon has been labelled by contemporary academics and scholars as “eco-Islam”. The latter involves both state and non-state actors dealing with a wide range of sustainability-related issues (nature conservation, commons management, urban development, ethical finance and economics, food sovereignty, etc.). Thus, it encompasses different trends, currents, and movements. The environmentalist movements of “Green” Islam, for example, have recently found their place in the global environmental movement. In sum, the social and cultural macro-phenomenon that I will refer to as ‘eco-Islam’ can be defined as a globalised contemporary

³²³ Qur’an, 40:57. See also Gottlieb, *A Greener Faith*, 8. Unless otherwise indicated, all the English quotations of the Quran are taken from Abdullah Yusuf Ali, *The Meaning of the Holy Quran* (Beltsville, Maryland, USA: Amana Publications, 10th ed., 1997).

³²⁴ Qur’an, 17:68–9. See Muhammad Muinul Islam, “Towards a Green Earth: An Islamic Perspective,” *Asian Affairs* 26, no. 4 (October-December 2004): 50.

³²⁵ Mary Evelyn Tucker, “World Religions and Ecology,” in *Berkshire Encyclopedia of Sustainability*, vol. 1, *The Spirit of Sustainability*, ed. Willis Jenkins (Great Barrington, MA: Berkshire Publishing Group, 2010).

movement for the “ecological renaissance” of Islam. It covers different fields of knowledge (ethics, theology, science, ecology, economics, finance and trade, sociology, politics) and, consequently, includes different actors (religious and academic scholars, religious authorities, intellectuals, activists, civil society organisations, ENGOs, financial institutions, governmental bodies, individuals, communities), each of them espousing a specific approach to environmental or sustainability matters.³²⁶

From its outset in the late 1960s-early 70s, ‘eco-Islam’ has been the outcome of the theological, philosophical and intellectual efforts made by a committed movement of Muslim/non-Muslim theologians and academic scholars who advocate a ‘greener’, more ecologically minded version of Islam and of its basic tenets and principles.³²⁷ This pioneering group of Islamic scholars (most of whom were born in Muslim-majority countries, but who now live and work in the West)³²⁸ has attempted to rediscover the primary Islamic sources of ecological wisdom. Basically, these authors have used, referred to, and reinterpreted the Quran and the prophetic traditions, while some of them have gone further by restoring and including Shariah-based norms deduced from legal-juridical resources (*fiqh*, “Islamic jurisprudence”). The main goal of their scholarly endeavour has been to build a series of *Islamic eco-ethics* that includes both theology and law. The currently existing theories of Islamic eco-ethics draw on a set of underlying principles that are mostly rooted in classical Islamic sources (the Quran

³²⁶ See Schwencke, *Globalized Eco-Islam*, 7.

³²⁷ For a focus on the debate around the so-called “Islamisation of ecological knowledge”, see for example Kaveh L. Afrasiabi, “Toward an Islamic Ecotheology,” 369.

³²⁸ These scholarly pioneers have also offered a critique of modern science and technology in which they analysed the ecological pitfalls of contemporary Western secularism and the alternative potential of an ethically-based “Islamic science”. Their scholarly work has therefore triggered a broader debate about the Islamic ethical-moral responses to the concrete realities of the current global ecological crises.

and the Sunnah). Given that the Islamic faith is characterised by a comprehensive approach at both an ontological and epistemological level, it is also important to clarify that Islamic eco-ethics/eco-theology offers a clear-cut conception of the human relationship with God and with the natural environment. My own view on this point, as I will explain later, is that in some respects the most prominent models of Islamic eco-ethics/eco-theology position themselves between a “*theanthropocentric*” (i.e., both God- and human-centred)³²⁹ and a “*bio-centric*” (nature-centred) view. Notwithstanding this theoretical ambiguity, the typical flexibility and plurality of the ethical legacy of Islam has prompted a continuously adaptive system of ecological learning within Islamic culture.³³⁰ In truth, these two theoretical poles reflect the different ideological articulations of contemporary Islamic environmental thought.³³¹ Within this framework, for example, some Islamic scholars have emphasised the “bio-centric” and spiritual aspects of the Islamic doctrine by adopting a mystical, eco-philosophical approach to Islamic ethics and theology. Other scholars within the field put more emphasis on the “anthropocentric and utilitarian bias” of Western modern science and technology for having produced an

³²⁹ Kaveh L. Afrasiabi has noted that the anthropocentric interpretation of Islam corresponds with the humanist tradition in Islam. See Afrasiabi, “Toward an Islamic Ecotheology,” 367.

³³⁰ As stated by Damian Howard S.J., “[...] Islam, by virtue of the exclusive and absolute demand of its monotheism, has actually managed to avoid the trap of disordered anthropocentrism into which some Western thought has fallen. Indeed, this anthropocentrism and the moral crisis which flows from it are experienced by Muslims by and large not as by-products of their history but as an extraneous intrusion which has impacted on them through past colonialism and present globalisation. Both these facts give Muslims a certain advantage in responding effectively to the challenges of the ecological crisis and suggest that Christians might have something to learn from the experience and perspective of Muslims”. See Howard, “An Islamic Declaration on Climate Change,” n.p.

³³¹ On this point, see May Thorseth, “Limitations to democratic governance of natural resources,” in *The Politics of Sustainability: Philosophical Perspectives*, eds. Dieter Birnbacher and May Thorseth (Abingdon, Oxon; New York, NY: Routledge Studies in Sustainability, 2015), 37. On the difference between biocentrism and ecocentrism, see, for example, <http://www.eolss.net/sample-chapters/c13/e4-25-07-03.pdf>.

ecological catastrophe. The latter have proposed Islamically-oriented ethical approaches and solutions to the global ecological crisis by addressing scientific and technological knowledge from an Islamic standpoint.

In addition, a group of scholars (as we will discuss in Chapter 4) has almost exclusively opted for a selective revitalisation of Shariah-based ‘eco-friendly’ norms, injunctions, methods and institutions which, according to them, could help put some Islamic ethical and theological principles into practice for ecological purposes.³³² In their view, the contemporary Islamic jurisprudence of the environment (*fiqh al-bī’ah*) has succeeded in bringing to the fore the importance of nature conservation and ecological care in Islam thanks to the interpretive work of the classical law schools (*madhāhib*), as well as of the Islamic jurists (*fuqahā’*) who have historically proposed ethical lawmaking models. According to the same Islamic scholars, the reactivation of the classical notion of judicial interpretive effort (*ijtihād*) may foster the implementation of local environmental governance systems in contemporary Muslim societies (also known as Islamic communal

³³² The term *fiqh* (literally, “understanding”/“discerning” and, by extension, the “knowledge of the law”) has different meanings; here it signifies a juridical discipline “developed from the eighth century onwards” under the influence of different Sunni/Shi’i *fiqh*-schools (“schools of law”). As explained by Abdullaah Jalil, Asharaf Mohd Ramli and Syahidawati Shahwan, *fiqh* is generally divided into two macro-categories: “*Fiqh al-‘Ibādāt*: Refers to the Shariah rulings related with the worship of Allah; *Fiqh Mu‘āmalāt*: Refers to Shariah rulings related with the interpersonal relationship between a person and others”, [...] “Thus, it [*fiqh al-mu‘āmalāt, editor’s note*] covers matters related to marriage, divorce, criminal procedures, disputes settlement, business and financial dealings, rulers’ rights and responsibilities, citizens’ rights and responsibilities, international communications and etc.”. See Abdullaah Jalil, Asharaf Mohd Ramli, and Syahidawati Shahwan, *The Four Introductory Theories of Fiqh Muamalat* (Nilai, Negeri Sembilan, Malaysia: Wisdom Publication, 2014), 3–5, accessed May 19, 2016, <https://comaif.files.wordpress.com/2014/02/2014-02-19-the-4-intro-theories-of-fm-master-copy.pdf>. See also Mustafa Abu-Sway, “Toward an Islamic Jurisprudence of the Environment (*Fiqh al-Bi’ah fi’l-Islam*),” Lecture presented at Belfast Mosque, February 1998, <https://www.missionislam.com/science/enviroment.html>, last updated June 20, 1999.

resources management systems).³³³ More recently, some groups of scholars have gone further by urging for either the establishment of Islamic social, political, and economic governance systems, or for the creation of Islamic finance, trade and banking systems. This sort of “Islamic pragmatism” with regard to ecological issues, as rightly observed by Schwencke,³³⁴ has undoubtedly influenced the current activities of international Islamic institutions, Islamic policy-making arenas, global interfaith platforms, civil society organisations, single individuals and Muslim communities worldwide.³³⁵

In order to clarify this, I will discuss the main theoretical principles that some contemporary Islamic eco-thinkers have construed as constituting the bulk of Islamic eco-ethics in paragraph 2.1.³³⁶ With

³³³ As stated by Anne Marieke Schwencke, “the management of communal resources (water, forests, and grazing lands), public and private property, just treatment of animals and various economic injunctions, such as opposition to usury, wasteful consumerism and excessive amassing of wealth”. See Schwencke, *Globalized Eco-Islam*, 11. See also Adi Setia, “The Inner Dimension of Going Green: Articulating an Islamic Deep-Ecology,” *Islam and Science* 5, no. 2 (Winter 2007): 118–9; and Ismail Hobson, “Islam’s Guiding Principles for a Solution to Environmental Problems,” in *Islam and the Environment*, ed. Harfiya Abdel Haleem (London-New York: Ta-Ha Publishers, 1998), 41–2. In addition, contemporary eco-Islamic scholars have urged for the application of the Shariah-based legal traditions on practical matters (*al-aḥkām al-shar‘iyyah al-‘amaliyyah*) — and, notably, to follow the guidelines provided by the *Maqāṣid al-Sharī‘ah* (“the objectives/purposes behind Islamic rulings”) in both top-down environmental decision-making processes and to real-life practical circumstances. This implementation phase is actually meant to prevent, or at best dispel, the dangers posed, for example, by those (Muslims) attempting to plunder the Earth and its resources for mere functional or utilitarian purposes.

³³⁴ See Schwencke, *Globalized Eco-Islam*, 22.

³³⁵ *Muslim environmentalism* (i.e., Muslim engagement and participation in grassroots ecological movements that are not necessarily inspired by Islamic values and principles) has widened the global “green” public sphere, that is, the cross-cultural public arena where global civil society works out a new value system and a transition path toward a more sustainable world.

³³⁶ See, among others, Fazlun Khalid and Johanne J. O’Brien, *Islam and Ecology* (New York: Cassell, 1992); A. R. Agwan, *The Environmental Concern of Islam* (New Delhi: Institute of Objective Studies, 1992); and idem, ed., *Islam and the Environment* (New Delhi: Institute of Objective Studies, 1997). See also Richard C. Foltz, Frederick Mathewson Denny, and Azizan Haji Baharuddin, eds., *Islam and Ecology: A Bestowed Trust* (Cambridge, Mass.: Center for the Study of World Religions, Harvard Divinity School; Distributed by Harvard University Press, 2003).

an understanding of these foundational precepts and principles, which are mostly derived from the Quran and the Sunnah, we can then conduct analysis on a set of Islamic “green” concepts (e.g., environment, earth, water, etc.), including Islamic eco-ethical stances towards animals, water, air, land and property rights, plants and forests, species and biodiversity, pollution and wastefulness (par. 2.2). In the following paragraphs of this chapter, I will briefly outline of the two main Islamic eco-paradigms of thought that have historically characterised “eco-Islam”, namely the “Islamic eco-ethics” paradigm and the “Islamic/Muslim eco-activism” paradigm (par. 2.3). Then, I will specifically focus on the current resonance of the Islamic ecological models and approaches within the international and ecumenical communities dealing with environmental protection and other sustainability issues (e.g., climate change) (par. 2.4). I will conclude with evidence on how Muslim global eco-activism has given impetus to several technological, social, and economic novelties in contemporary Islamic (and Muslim) culture, such as the invention and evolution of Islamic “green” lifestyles and buildings, as well as of ‘green’ religious events, rituals and customs (par. 2.4).

2.1. Islamic eco-ethics: foundational principles and concepts

In this paragraph, as we delve into and explore Islamic eco-ethics, we have the opportunity to analyse: (a) whether the traditional Islamic doctrine can helpfully contribute to the articulation of present-day ecological ideas and worldviews; (b) how and to what extent Islamic core values, principles, and ethical beliefs can mould Muslims' behaviour toward the ecological "others" (e.g., plant and animal life); and (c) whether the so-called "greening of Islam"³³⁷ would encourage the diffusion of globally shared practices of sustainability for the benefit of the entire Earth community.³³⁸

To devise a set of Islamic eco-ethics,³³⁹ Islamic eco-scholars have relied on a series of spiritual and religious resources which have permitted the creation of a collective ecological consciousness built around basic values and beliefs.³⁴⁰ As already stated, the Islamic religious-doctrinal tradition encompasses a range of foundational principles and precepts that have informed and guided the construction and elaboration of contemporary Islamic eco-ethical and eco-

³³⁷ As stated by Rodney Petersen, the unfamiliar yet crucial expression "greening Islam" refers to the various social and political processes through which Islam may become "an aspect of social dissent in a quest for eco-justice rather than supportive of established orders". See Petersen, "Religion and the Quest for Equity," 202.

³³⁸ I specifically refer here both to the belief in the sacred and spiritual character of nature and to the idea of a human community living in harmony with nature and its resources.

³³⁹ See, for example, Islamic Sciences & Research Academy (ISRA), "Environmental Ethics in Islam," ISRA Australia, Power Point Presentation, accessed June 5, 2016, <http://www.ceosyd.catholic.edu.au/Parents/Religion/Documents/20130715-doc-EnvironmentalEthicsIslam.pdf>; Munjed M. Murad, "Islamic Environmental Stewardship: Nature and Science in the Light of Islamic Philosophy," *Union Seminary Quarterly Review* 63, nos. 1–2 (2011): 145–63, accessed May 9, 2015, <http://usqr.utsnyc.edu/wp-content/uploads/2011/08/MuradUSQRv63-1-2.pdf>.

³⁴⁰ For a complete overview on the metaphysical dimension of nature from the Muslim perspective, see, for example, Jihad Hashim Brown, *Metaphysical Dimensions of Muslim Environmental Consciousness*, Tabah Essays Series 3 (Abu Dhabi, U.A.E: Tabah Foundation, 2013), accessed March 8, 2016, <http://www.tabahfoundation.org/research/pdfs/Jihad-Brown-Metaphysical-dimensions-Tabah-Essay-En.pdf>.

theological views.³⁴¹ The most important eco-ethical principle, which forms the basis of the Islamic environmental philosophy, is the monotheistic principle of Tawhid (*Tawhīd*), the Oneness and Unity of God.³⁴² The Tawhid principle may be interpreted not only as evidence of the divine essence said to reside in nature,³⁴³ but also as the expression of the unity, equality, interdependency, and interconnectedness of all God's creatures. According to the Islamic eco-scholar Parvez S. Manzoor, Tawhid can be considered as "the *sine qua*

³⁴¹ See Najma Mohamed, "Islamic Education, Eco-Ethics and Community," *Studies in Philosophy and Education* 33, Issue 3 (May 2014): 316–17. On the scholastic theology (*kalām*, in Arabic "speculative reasoning"), philosophy, and mysticism of Sunni Islam see for example Gregor Schwarb, "Kalām," in *Encyclopedia of Jews in the Islamic World*, ed. Norman A. Stillman, first published online: 2010, accessed October 21, 2016, http://referenceworks.brillonline.com/entries/encyclopedia-of-jews-in-the-islamic-world/kalam-COM_0015890. The work of Abū Ḥāmid Muḥammad ibn Muḥammad al-Ghazālī (1058–1111) is also worth a mention when talking about the theological view of nature in Islam. Al-Ghazali (Al-Ghazālī) was one of the most influential Islamic philosophers, theologians, Sufi-mystical thinkers, and jurists of Medieval Islamic culture. In his treatise titled *The Wisdom in God's Creations*, he adopted an empiricist approach to the analysis of Divine Creation. For more on this, see Abū Ḥāmid Al-Ghazālī, *Al-Ḥikmah fī Makhlūqāt Allāh*, ed. Muḥammad Rashīd Riḍā al-Qabbānī (Bayrūt: Dār Iḥyā' al-'Ulūm, 1978); Ahmed El Shamsy, "The Wisdom of God's Law: Two Theories," in *Islamic Law in Theory: Studies on Jurisprudence in Honor of Bernard Weiss*, eds. A. Kevin Reinhart and Robert Gleave (Leiden-Boston: Brill, 2014), 19 ff. On the Sufi perspective on ecology and mystical knowledge, with specific reference to the work of the Sufi poet Jalāl al-Dīn Rūmī (1207–1273), see Nayyar Javed, "Sufi Path: Possibilities of Transcending Limited and Limiting Identity," in *Radical Human Ecology: Intercultural and Indigenous Approaches*, eds. Lewis Williams, Rose Roberts, and Alastair McIntosh (Farnham, UK: Ashgate, 2012), 163–6.

³⁴² As stated by Irene Dietzel, "the doctrine of the 'Unity of Being' (*waḥdat al-wujūd*), originally developed by the Andalusian Muslim Ibn 'Arabī (1165–1240) forms an important axis of Islamic eco-theology". See Irene Dietzel, *The Ecology of Coexistence and Conflict in Cyprus: Exploring the Religion, Nature, and Culture of a Mediterranean Island* (Boston/Berlin/Munich: de Gruyter, 2014), 73. On Ibn 'Arabī's monist metaphysics, see Richard C. Foltz, "Islamic Environmentalism in Theory and Practice," in *Worldviews, Religion, and the Environment: A Global Anthology*, ed. Richard C. Foltz (Australia; Belmont, CA: Thomson/Wadsworth Publishing, 2003), 359.

³⁴³ Such a view of the Creation, however, is at odds with the mainstream Sunni orthodox Islam, which has tended to reject it as a pantheistic view resembling *shirk* ("polytheism"/"paganism"). On this point, see Foltz, "Islamic Environmentalism in Theory and Practice," 359.

non of Islamic faith”.³⁴⁴ Regarding this notion of Islam, reference is often made to the following verse of the Quran:

But to Allah belong all things In the heavens and on earth; And He it is that Encompasseth all things.³⁴⁵

From this monistic and unitary view, twelve notions are derived that are of relevance to Islamic eco-ethical thought.

First: unity. There is the basic acceptance of God as the only source of all things.³⁴⁶ In this interpretation, everything belongs to God, He is the Possessor,³⁴⁷ He is Al-Muhit (*Al-Muḥīṭ*), the Encompassing (which is one of the ninety-nine names of Allah).³⁴⁸

Second: dependency. All living creatures (such as humans, birds, animals, and so on), which are totally dependent on Him, sustain each other through their mutual relationships of dependence. In the words of the Islamic scholar Ismail Hobson, these living creatures do nothing but worship and praise God, their Creator,³⁴⁹ “in acknowledgment of the gift of life in this world and the potentiality of bliss beyond”.³⁵⁰ For this viewpoint, reference is often made to the following verses of the Quran:

³⁴⁴ Parvez S. Manzoor, “Environment and Values: The Islamic Perspective,” in *The Touch of Midas: Science, Values and Environment in Islam and the West*, ed. Ziauddin Sardar (Manchester: Manchester University Press, 1984), 155.

³⁴⁵ Qur’an, 4:126.

³⁴⁶ See Qur’an, 6:102. See also Surah 112 (Al-Ikhlās, “The Purity of Faith”).

³⁴⁷ Cf. Qur’an, 2:164 and 30:26. As stated by Charles Le Gai Eaton, “It is when we imagine that the world belongs to us, with absolute rights of ownership, that love of the world becomes a great evil”. See Charles Le Gai Eaton, “Islam and the Environment,” in *Islam and the Environment*, ed. Harfiyah Abdel Haleem (London-New York: Ta-Ha Publishers, 1998), 48.

³⁴⁸ “To God belongs all that is in the heavens and in the earth, for God encompasses everything” (Qur’an, 4:126). See also Qur’an, 112:1–2; as cited in Islam, “Towards a Green Earth,” 48.

³⁴⁹ Cf. Qur’an 59:24 and 64:1.

³⁵⁰ Hobson, “Islam’s Guiding Principles,” 37. Cf. Qur’an, 3:191; 21:16; 23:115; 38:27; and 44:38–9.

[...] Whithersoever you turn, there is Allah's countenance.³⁵¹

The seven heavens and the earth, And all beings therein Declare His Glory: There is not a thing But celebrates His praise: And yet ye understand not how they declare His glory! [...].³⁵²

Seest thou not that To Allah bow down in worship All things that are In the heavens and on earth – The sun, the moon, the stars; The hills, the trees, the animals; And a great number among Mankind? [...].³⁵³

And the herbs and the trees – Both (alike) bow in adoration.³⁵⁴

Third: purpose. Further, the divine Creation³⁵⁵ is an ongoing purposeful process directed by God³⁵⁶ and, more importantly, God's majesty, sovereignty, and power over all Creation make humankind a part of nature rather than above it.³⁵⁷

Fourth: sustenance. The whole of Creation is described as a reward, a gift of God's benevolence, mercy and grace (*ni'mat Allah*, "God's blessing"). Thus, human beings ought to be grateful to Him because He has provided humankind and all other creatures with

³⁵¹ Qur'an, 2:115. See also Mohd Yaseen Gada, "Environmental Ethics in Islam: Principles and Perspectives," *World Journal of Islamic History and Civilization* 4, no. 4 (2014): 132, DOI 10.5829/idosi.wjihc.2014.4.4.443, accessed May 7, 2016, [http://idosi.org/wjihc/wjihc4\(4\)14/3.pdf](http://idosi.org/wjihc/wjihc4(4)14/3.pdf).

³⁵² Qur'an, 17:44.

³⁵³ Qur'an, 22:18.

³⁵⁴ Qur'an, 55:6.

³⁵⁵ God is the Almighty Creator, Al-Khaliq (*al-Khāliq*; from *khalq*, "Creation"), the Sustainer of the Universe (*Rabb al-'Ālamīn*, "Lord of the Worlds") (see for example Qur'an, 1:1) and its final goal (Cf. Qur'an, 3:191; 38:27; 23:15; and 24:42). Muslim believers are thus submitted to Him alone (Qur'an, 22:65). As observed by Roger Timm in his book chapter about the Islamic Creation theology, "nature and reason clearly witness to the unity of Allah". See Roger E. Timm, "The Ecological Fallout of Islamic Creation Theology," in *Worldviews and Ecology: Religion, Philosophy, and the Environment*, eds. Mary Evelyn Tucker and John Grim (Maryknoll: Orbis Books, 1994), 84. Timm also declares that "like the Bible, the Qur'an states that Allah created the world in six days (7:54; 10:3; 11:7; 25:59; 32:4; and 57:4)". See Roger E. Timm, "The Ecological Fallout," 85.

³⁵⁶ See Muhammad Umer Chapra, *Islam and Economic Development: A Strategy for Development with Justice and Stability* (Islamabad, Pakistan: International Institute of Islamic Thought and Islamic Research Institute, 1993), 5; and Timm "The Ecological Fallout," 86.

³⁵⁷ See Qur'an, 25:2.

abundant resources and amenities (water, air, livestock, plants, etc.).³⁵⁸ All forms of life are valuable in themselves and necessary; they occupy a special place in which they play their own self-preserving and complementary roles.³⁵⁹

Fifth: balance. Thus, human beings represent just a finite parcel, and an inseparable part of this meticulously and perfectly balanced, carefully measured, and ordered natural system (*mīzān* or *tawāzun*, i.e., “a state of dynamic balance/moderation/equilibrium/harmony”),³⁶⁰ This idea can be understood from the following Quranic verses (*āyāt al-Qur’ān*):

Verily, all things Have We created In proportion and measure.³⁶¹

And the Earth We have spread out (Like a carpet); set thereon Mountains firm and immovable; And produced therein all kinds Of things in due balance.³⁶²

³⁵⁸ Cf. Qur’an, 2:2. As Yasin Dutton puts it: “[...] in Surat an-Nahl (16), for instance, we read how cattle and other domestic animals have been created for man, how they provide him with food from their flesh and milk, and clothing from their hides and hair, as well as being a means of transport for him and his goods, and also simply a pleasure to look at (5–7; 80); how horses, mules and donkeys have been created for riding and as an object of beauty (v. 8); how the rain is sent down as a source of water for man to drink and for plants to be able to grow and in turn to provide him and his animals with food (10–11). The night, the day, the sun, the moon, the stars and the sea have all been subjugated for man’s benefit (12,14). From the sea, man gets fish for food, and coral and pearls for wearing as ornaments (14); and by the stars he guides himself (16). In other *surahs* we read that the sun and the moon provide man with light and the day allow him to divide this time between rest and activity [...]”. See Yasin Dutton, “Islam and the Environment: A Framework for Enquiry,” in *Islam and the Environment*, ed. Harfiya Abdel Haleem (London-New York: Ta-Ha Publishers, 1998), 57–8.

³⁵⁹ Cf. Qur’an, 55:7–10 and 67:3–4.

³⁶⁰ Cf. Qur’an, 13:8; 15:21 and 25:2.

³⁶¹ Qur’an, 54:49.

³⁶² Qur’an, 15:19. See also Gada, “Environmental Ethics in Islam,” 131. As stated by Ahmad Shafaat, “the Qur’an refers to the stars which decorate the sky (50: 6–8), to the majestic mountains which stabilize the earth (31: 10–11), to the sun and moon and their movements on their well-defined courses (36: 38–40), to the fecundating role of winds (15: 22), to plants that produce fruits and grains, each with a different taste (13: 4, 36: 32–35), to cattle out of whose bellies comes healthy milk from between blood and refuse (16: 66), and to the bees and their production of honey, in which there is healing for human beings (16: 69)”. See Ahmad Shafaat, “Ecology and the Teachings of the Prophets Muhammad and Jesus,” *Islamic Perspectives*, 1999, accessed March

This inherent equilibrium of the planet is under continuous threat due to human negligence and carelessness toward God’s Creation, and Muslims are therefore asked in the Quran to be attentive:

And the Firmament has He Raised high, and He has set up The Balance (of Justice), In order that ye may Not transgress (due) balance. So establish weight with justice, And fall not short In the balance.³⁶³

Contemporary Muslim intellectuals of Islamic eco-ethics often refer to the Quran to underline the autonomous capacity of humans to change their unjust and corrupt behaviour in order to fix the current ecological problems:

[...] Allah does not change the condition Of a people until they Change it themselves (With their own souls).³⁶⁴

Their main point is that the loss of harmony between humans and nature is a sign of the erosion of the relationship between humans and their Creator:

Mischief has appeared On the land and sea because of (the meed) that the hands Of men have earned [...].³⁶⁵

In sum, God’s Creation has to be respected and protected (*hurmah*, “sanctity”, “protection”) by humans because: (a) it reflects His power, perfection and beauty;³⁶⁶ (b) not only humans but also other natural entities do praise, glorify and worship God;³⁶⁷ and (c) God will hold human beings responsible for their individual as well as collective behaviours and attitudes toward the natural world by rewarding or

8, 2016, <http://www.islamicperspectives.com/Ecology.htm>. As quoted in Ibrahim Abu Bakar, “Islamic Theological Teachings on Ecology,” *International Journal of Business and Social Science* 3, no. 13 (July 2012): 223–4.

³⁶³ Qur’an, 55:7–9. See also Hobson, “Islam’s Guiding Principles,” 41.

³⁶⁴ Qur’an, 13:11. See also Dutton, “Islam and The Environment,” 57.

³⁶⁵ Qur’an, 30:41. See also Dutton, “Islam and The Environment,” 56.

³⁶⁶ Cf. Qur’an, 67:3.

³⁶⁷ Cf. Qur’an, 17:44; 22:18; and 24:41–2.

punishing them accordingly.³⁶⁸ In other words, an offence against the Creation is an offence against God.³⁶⁹ The Sufi Islamic scholar Charles Le Gai Eaton plainly asserts that “the loss of harmony [*i`tidāl*] between man and nature, the opposition set between them, is but an aspect of the loss of harmony between man and his Creator”.³⁷⁰

Moreover, the Islamic belief in God being the absolute final judge at the End of Time³⁷¹ entails that the natural world becomes the testing ground for each human’s morally responsible actions.³⁷² Human life and death are considered instrumental in God’s testing of human goodness (encapsulated in the notion of *iḥsān* that denotes the performing of good deeds, being virtuous and of good quality, and compassion to all living creatures) and faith. This is also a test of repentance, humility, obedience and loyalty to God (encapsulated in the notion of *Islām* that means “submission” [to the will of God]).³⁷³

Sixth: Signs of God. According to some contemporary Muslim eco-ethicists, the moral duty to fulfil and realise God’s will on Earth urges humans to observe the wonders of nature and of all its beings. Thus, from their viewpoint, human beings ought to find, decipher and

³⁶⁸ “The seven heavens and the earth and all that is therein praise Him, and there is not such a thing but hymneth his praise; but ye understand not their praise. Lo! He is ever Clement, Forgiving (Qur’an, 17:44).” See Mawil Y. Izzi Dien (Samarrai), “Islamic Environmental Ethics, Law and Society,” in *This Sacred Earth: Religion, Nature, Environment*, ed. Roger Gottlieb (New York: Routledge, 1996), 165. See also Fazlun Khalid, “Islam, Ecology and the World Order,” in *Islam and the Environment*, ed. Harfiyah Abdel Haleem (London-New York: Ta-Ha Publishers, 1998), 16 ff.

³⁶⁹ See Hobson, “Islam’s Guiding Principles,” 38.

³⁷⁰ Le Gai Eaton, “Islam and the Environment,” 46.

³⁷¹ The Quran states that the uncovering of human responsibilities will be addressed at the Day of Judgment, i.e., at the end of the world, when God will judge each human’s good and evil deeds. Qur’an, 99:7–8.

³⁷² As noted by F. Denny, the Quran conveys the message that “God is the ultimate holder of dominion over the creation (e.g., Surahs 2:107; 5:120), and that all things return to him (Surah 24:42) and are thus accountable each in their own ways”. See Frederick M. Denny, “Islam,” in *Berkshire Encyclopedia of Sustainability*, vol. 1, *The Spirit of Sustainability*, ed. Willis Jenkins (Great Barrington, MA: Berkshire Publishing Group, 2010), 243.

³⁷³ Cf. Qur’an, 3:83 and 67:1.

meditate upon the signs, tokens, symbols, reminders and proof³⁷⁴ of the power, goodness and mercy of God.³⁷⁵ They typically refer to the following Quranic verses:

On the earth Are Signs for those Of assured faith, As also in your own Selves: will ye not Then see?³⁷⁶

In their view, the Islamic metaphysical language depicts the World like a Book that reflects a Higher Reality.³⁷⁷ In addition, they argue that God has left signs for humans in His Creation, as well as in the Quran. The Arabic word *āyah* (pl. *āyāt*, “signs”, “tokens”, “marks”, “indications”), as Ismail Hobson observes, is used in reference to the following Quranic verses:

If the whole perceptible universe is a revelation of Allah’s Power and majesty, so is the Qur’an a revelation of Allah’s Power, Beauty and Mercy. He Who sent down the Qur’an into the world is he that created the word; this is a fundamental equation for the Muslim believer.³⁷⁸

³⁷⁴ *Natural āyāt* (i.e., natural elements or beings such as the sun, the moon, trees, animals etc. and the corresponding natural phenomena such as rain, sunset, sunrise, etc.) combine with *supernatural/revelational āyāt* (i.e., miracles, divine interventions, prophetic scriptures and the Qur’anic verses themselves). See William Chittick, “God Surrounds All Things’: An Islamic Perspective on the Environment,” *The World and I* 1, no. 6 (June 1986): 674.

³⁷⁵ Cf. Qur’an, 16:65–9; 41:53; and 88:17–20.

³⁷⁶ Qur’an, 51:20–1. See also Gada, “Environmental Ethics in Islam,” 131.

³⁷⁷ The mystical dimension of Islam enshrined in the Sufi tradition (in Arabic *taṣawwuf*, “Sufism”) is particularly sensitive to these metaphysical-spiritual elements. For example, the Turkish Islamic scholar Said Nursi (1878–1960) — as the Islamic studies scholar Mohd Yaseen Gada states in a recent article — “views nature as the book of the universe”. See Gada, “Environmental Ethics in Islam,” 132. See also Salih Yucel and Selma Sivri, “Said Nursi’s Approach to the Environment: A Spiritual View on the Book of Universe,” *Insights* 1, Issue 4 (June 2009): 77–96. For further details about the spiritual and philosophical aspects of the Sufi tradition, see for example Fahri Karakas, “Exploring Value Compasses of Leaders in Organizations: Introducing Nine Spiritual Anchors,” *Journal of Business Ethics*, 93, Supplement 1 (June 2010): 73–92, DOI10.1007/s10551-010-0627-6, accessed December 7, 2015. See also Seyyed Hossein Nasr, *An Introduction to Islamic Cosmological Doctrines* (London: Thames and Hudson Press, 1978). On the sense of the sacred in the things of this world (i.e., the so-called “horizontal sacred”), see McDaniel, “Ecotheology and World Religions,” 29.

³⁷⁸ Hobson, “Islam’s Guiding Principles,” 38.

In this view, only God has a complete knowledge of His Creation and of Reality.³⁷⁹ Natural and supernatural dimensions are thus dependent on each other.

Seventh: trust. Nevertheless, as claimed by most scholars in the field, the human enactment of a sort of “pondering mission”, which is entrusted by God to humanity, makes all human beings responsible stewards and custodians of His Creation.³⁸⁰

Eighth: stewardship. As explained by the economist M. U. Chapra, God has bestowed upon humans,³⁸¹ who are sentient and rational beings “endowed with freewill, rationality and moral consciousness combined with an inherent God-consciousness”,³⁸² the role of stewards and vicegerents (*khalīfah*, “steward/deputy/guardian”; *khilāfah*, “vicegerency”) on Earth and trustees (*amānah*, “trust/trusteeship”) of His Creation.³⁸³

Behold, thy Lord said to the angels: “I will create A vicegerent on earth.” They said: “Wilt Thou place therein one who will make Mischief therein and shed blood? – whilst we do celebrate Thy praises And glorify Thy holy (name)?” He said: “I know what ye know not”.³⁸⁴

It is He Who has made You His agents, inheritors Of the earth [...].³⁸⁵

It is Allah Who has Subjected the Sea to you, That ships may sail Through it by His command, That ye may seek of His Bounty, and that Ye may be grateful. And He has subjected To you, as from Him, All that is in the heavens, And on Earth [...].³⁸⁶

³⁷⁹ Cf. Qur’an, 6:59.

³⁸⁰ Cf. Qur’an, 96:1–2; 2:28; 5:48; 21:16; and 38:26.

³⁸¹ “Lo! We offered the trust unto the heavens and the earth and the hills, but they shrank from bearing it and were afraid of it. And man assumed it” (Qur’an 33:72); as cited in Izzi Dien, “Islamic Environmental Ethics,” 166.

³⁸² Chapra, *Islam and Economic Development*, 5.

³⁸³ Cf. Qur’an, 2:30; 6:165; 17:70; 35:39; 38:28; and 57:7. For a detailed account of the Islamic interpretation of human trusteeship, see David L. Johnston, *Earth, Empire, and Sacred Text: Muslims and Christians as Trustees of Creation* (Sheffield: Equinox, 2013 [2010]), 239–68.

³⁸⁴ Qur’an, 2:30.

³⁸⁵ Qur’an, 6:165.

³⁸⁶ Qur’an, 45:12–3.

Ninth: accountability. This viewpoint seems to support the idea that, since humankind holds the earth in usufruct, human beings must take responsibility toward all God's creatures. The advocates of this position chiefly hold that the divine ownership of nature, and the subsequent rejection of the dogma of the human mastery over nature, simply means that human beings are not the landlords of the Earth. Thus, humans have neither the right to haphazardly use natural resources nor to exploit natural ecosystems beyond their carrying capacity. The Turkish philosopher and Muslim environmentalist İbrahim Özdemir underlines this point when he notes that the Earth is not at human disposal and that "nature, with all its rich resources has been given and entrusted to him".³⁸⁷ According to the environmental researcher and writer Najma Mohamed, God invites Muslims to respect, nurture and safeguard the Earth and its natural resources; if they do not accomplish this task during their earthly life, on the Day of Judgment they will be held accountable for their actions before God and His Divine Law.³⁸⁸ The Quran affirms that:

Then shall anyone who Has done an atom's weight Of good, see it! And anyone who Has done an atom's weight Of evil, shall see it.³⁸⁹

As explained by Hobson, God had initially presented the offer of a global trusteeship to the Heavens, the Earth, and the Mountains,³⁹⁰ but they all refused because they were afraid of taking responsibility for the whole Creation:

³⁸⁷ İbrahim Özdemir, "Towards an Understanding of Environmental Ethics from a Qur'anic Perspective," in *Islam and Ecology: A Bestowed Trust*, ed. Richard C. Foltz, Frederick M. Denny, and Azizan Baharuddin (Cambridge, Mass.: Center for the Study of World Religions, Harvard Divinity School; Distributed by Harvard University Press, 2003), 30.

³⁸⁸ See Mohamed, "Islamic Education," 317. See also Islamic Sciences & Research Academy (ISRA), "Environmental Ethics in Islam," slide 20.

³⁸⁹ Qur'an, 99:7-8.

³⁹⁰ See Qur'an, 33:72.

We offered the trust (al-amanah) to the Heavens and the earth and the mountains, but they demurred from the bearing of it and were frightened by it, but man bore it; surely he has proven benighted, ignorant.³⁹¹

Humankind, as the North American Islamic scholar Frederick M. Denny has remarked, eventually accepted to shoulder that heavy burden, and since then has occupied a privileged position, even higher than the Angels of God.³⁹² To this, other scholars have added that although humans possess unique attributes and characteristics ('*aql*, "reason/rationality", "free will", and "ability to do both good and evil"),³⁹³ they have often mishandled God's trust because of their disobedience, hypocrisy and disbelief (in Arabic *kufur*, which also means "ingratitude").³⁹⁴ As a result, human beings continue to be agents of ecological damage and destruction.

Tenth: reverence. As noted earlier in reference to the Quranic 'eco-message', the Quran says that God enabled human beings to meet their legitimate biological-material needs and to enjoy the bounty and beauty of nature;³⁹⁵ however, as the Muslim environmental activist Fazlun Khalid clearly states, humans shall act within the limits imposed by "the natural order of things".³⁹⁶ In his view, humankind ought to ensure and protect the interests and rights of God's Creation through sentiments and acts of compassion, respect, care, and awe (*taqwà*,

³⁹¹ Qur'an 33:73. See also Hobson, "Islam's Guiding Principles," 37.

³⁹² See Denny, "Islam," 243.

³⁹³ On the Quranic expression *al-amr bi-l-ma'rūf wa-n-nahy 'an al-munkar* ("enjoining what is good and forbidding what is wrong"), see, for example, Abdullah Saeed, "Economics," in *Encyclopedia of the Qur'an*, vol. 2 (E-I), ed. Jane Dammen McAuliffe (Leiden-Boston: Brill, 2002). On the Islamic *ahl al-naql* ("knowledge transmitted by revelation and tradition") and *ahl al-'aql* ("knowledge transmitted by independent reason") debate, see Ammar, "An Islamic Response to the Manifest Ecological Crisis," 376.

³⁹⁴ See Qur'an, 33:72–3. See also Hobson, "Islam's Guiding Principles," 35; and Chittick, "God Surrounds All Things," 675.

³⁹⁵ See Qur'an, 17:70. "It is He Who hath created for you all things that are on Earth" (Qur'an, 2:29); as cited in Islam, "Towards a Green Earth," 51.

³⁹⁶ Khalid, "Islam, Ecology and the World Order," 19.

“God-consciousness”, “reverential awe”).³⁹⁷ Khalid and other eco-thinkers contend that in order to express their gratitude to God for the beauties and wonders of the natural world, Muslims are asked to worship God by loving and taking care of His Creation. Consequently, human beings are made accountable toward God for all their actions, including the way they treat the environment. As one famous hadith (*ḥadīth*) declares:

The world is beautiful and verdant and God has appointed you as His stewards over it. He sees how you acquit yourselves (*Ṣaḥīḥ Muslim*).³⁹⁸

Eleventh: servitude. The Sufi specialist William C. Chittick considers, for instance, the Islamic doctrine of *‘ubūdiyyah* (“servanthood”), which presupposes the conception of human servitude to God (*‘abd*, the Arabic word for “servant”). In a nutshell, he argues that the custodial role of humankind toward the natural resources of the Earth (which are held in trust from God), implies that surrendering to His guidance is the only way for Muslims to act as true vicegerents.³⁹⁹

Twelfth: natural state. According to some contemporary scholars of Islamic eco-ethics, Quranic anthropology prescribes that the human sins of ecological damage, misuse and waste (*fasād*, “corruption”, “desolation”/*mufsid fī-l-‘ard*)⁴⁰⁰ can be cleansed by going back to the original and natural state of purity (*fiṭrah*, “natural state”) of God’s Creation.⁴⁰¹ The term *fiṭrah* refers to the ethical conscience of primal

³⁹⁷ On the concept of *taqwa* (*taqwā*), see also Islam, “Towards a Green Earth,” 52.

³⁹⁸ See Book of Hadith – *Ṣaḥīḥ Muslim*; as cited in Islamic Sciences & Research Academy (ISRA), “Environmental Ethics in Islam,” slide 28.

³⁹⁹ See Chittick, “‘God Surrounds All Things’,” 678.

⁴⁰⁰ “Mischievousness has appeared on land and sea because of (the meed) that the hands of men have earned. That (Allah) may give them a taste of some of their Deeds: in order that hopefully they may turn back (from Evil)” (Qur’an, 30:41).

⁴⁰¹ See Qur’an, 30:30.

reality.⁴⁰² Fazlun Khalid describes it as the innate goodness that “applies to all of creation including the human in its new born state”.⁴⁰³

So set thou thy face steadily and truly to the Faith: establish Allah’s handiwork (fitra) according to the pattern on which He has made mankind: no change let there be in the work wrought by Allah: that is the standard Religion: but most among mankind understand not.⁴⁰⁴

In addition, he observes that the primordial essence of Creation, which is immutable and bears a potential for goodness, amplifies a sense of equality between human beings and nature (the latter viewed as an interconnected whole led by a stable, balanced and ordered pattern of immutable natural laws).⁴⁰⁵ In his view, as human beings are the Guardians of the Earth, the application of this principle is thus supposed to prevent exploitative and predatory human attitudes toward the non-human world (see Qur’an, 91:7–8).⁴⁰⁶ For example, the Quranic verse 40:57 states that:

Assuredly the creation of the heavens and the earth is [a matter] greater than the creation of humankind; Yet most people understand not.

Another important Quranic passage (“There is not an animal in the earth, nor a flying creature flying on two wings, but they are peoples like unto you”, Qur’an, 6:38) reminds all Muslims that nature, which within itself is so internally diversified and complex because it is composed of several communities (*ummah*, “community”; see Qur’an, 6:38), bears moral rights and deserves absolute respect and reverence.⁴⁰⁷ In Islam, a genuine human elevation would be impossible if Muslims

⁴⁰² See Qur’an, 91:7–8. See also Izzi Dien, “Islamic Environmental Ethics,” 166.

⁴⁰³ Fazlun Khalid, “Islamic Basis for Environmental Protection,” in *The Encyclopedia of Religion and Nature*, eds. Bron Taylor and Jeffrey Kaplan (London and New York: Thoemmes Continuum, 2005).

⁴⁰⁴ Qur’an, 30:3; as cited in Islam, “Towards a Green Earth,” 51.

⁴⁰⁵ Cf. Qur’an, 13:8; 15:21; 25:2; and 55:1–7. The human sinful transgression of natural laws is an act of disobedience to God’s will and law.

⁴⁰⁶ See Khalid, “Islam and the Environment, 337.

⁴⁰⁷ On this point, see also Gottlieb, *A Greener Faith*, 43.

abstained from reconsidering the holistic character of Earth's ecosystems in which, as commented by the Professor of Philosophy Roger S. Gottlieb, "everything has a 'natural' or 'proper' place".⁴⁰⁸

2.2. Islamic beliefs and attitudes towards nature⁴⁰⁹

In their discussions and programmes on Islamic eco-ethics, Muslim intellectuals and activists refer to several notions that need further clarification: environment, earth, water, air, plants and animals.

Environment

The term "environment" (known as *bī'a*)⁴¹⁰ is a recurring polysemous concept in the Quran. *Al-Muḥīt* ("The Encompassing"), which is one of the attributes of God, derives from the corresponding Arabic verb for (*to surround, encircle, encompass*).⁴¹¹ The Quran itself affirms that "God surrounds all things".⁴¹² God is equated with the environment, in the sense that He encompasses all of Creation; reversely, humankind is immersed in the divine *muḥīt*,⁴¹³ i.e. the God-

⁴⁰⁸ Gottlieb, *A Greener Faith*, 42; see also Bauman, Bohannon, and O'Brien, "Ecology," 54.

⁴⁰⁹ The Arabic term for "nature" is *ṭabī'a*. For a discussion on the definitions of *ṭabī'a* given by Medieval Muslim philosophers, see for example Richard C. Foltz's 2003 "Islamic Environmentalism in Theory and Practice," 358–9. For a comprehensive overview on Islamic attitudes toward nature, see Ömer Faruk Gürlesinan, "An Islamic Understanding of the Environment - Theory and Practice - A Survey on Turkish University Students" (MA Thesis, Leiden University, February 2009), accessed March 7, 2016, <https://leidenuniv.academia.edu/%C3%96merFarukG%C3%BCrlesin>. See also Ahmad Abedi-Sarvestani and Mansoor Shahvali, "Environmental Ethics: Toward an Islamic Perspective," *American-Eurasian Journal of Agricultural & Environmental Sciences* 3, no. 4 (2008): 613–5, accessed May 19, 2016, [http://www.idosi.org/aejaes/jaes3\(4\)/15.pdf](http://www.idosi.org/aejaes/jaes3(4)/15.pdf).

⁴¹⁰ See, e.g., Farhat Naseem Alvi and Afshan Noureen, "Understanding Ecology Issues and Finding their Islamic Solution," *Al-Azwa* 28, Issue 40 (December 2013): 45, accessed June 7, 2015, http://pu.edu.pk/images/journal/alqalam/PDF/5-%20afshan%20noureen_v28_issue40-2013.pdf.

⁴¹¹ Cf. Qur'an, 2:19; 11:92; and 4:126. See also Chittick, "God Surrounds All Things," 672.

⁴¹² Qur'an, 4:126.

⁴¹³ See Tony Watling, "Islamic Visions," in *Ecological Imaginations in the World Religions: An Ethnographic Analysis* (London-New York: Continuum, 2009), 171.

informed environment.⁴¹⁴ Looking into similar Quranic verses, the Islamic scholar Mawil Izzī Dien suggests that Quran portrays the environment as a human abode,⁴¹⁵ a living place (*ma'āyish*, “livelihood”) that is imbued with the Divine spirit:

It is We Who have Placed you with authority On earth, and provided You therein with means For the fulfilment of your life: Small are the thanks That ye give!⁴¹⁶

The Quran, as explained by Izzī Dien, also describes the environment as “the place of stillness” (*masākin*), i.e., a dwelling place for human beings as well as for all other creatures. Interestingly, this description echoes the modern concept of habitat.⁴¹⁷ Consequently, Islam as a religion prescribes specific arrangements for ensuring that the harmony of the natural environment can be sustainably preserved and protected from harm.⁴¹⁸

Earth

The Quran contains a lot of verses about the Earth (*al-arḍ*; literally “land”, “soil”), which is described as a precious gift bestowed by God upon humankind.⁴¹⁹ Thus, it is also indirectly stated that the Earth should not be degraded and abused by human beings.⁴²⁰ As Izzī Dien puts it:

Since the birth of Islam the environment has been considered as an integral part of the faith. Prostration [*sujūd*, ed.] provides a message of

⁴¹⁴ The Quran, as William Chittick asserts, declares that God “surrounds the disbelievers” (Qur’an, 2:19), and that He “surrounds what you are doing” (Qur’an, 11:92). See Chittick, “‘God Surrounds All Things,’” 672.

⁴¹⁵ See Qur’an, 7:10.

⁴¹⁶ Qur’an, 7:10. See Izzī Dien, *The Environmental Dimensions of Islam*, 24.

⁴¹⁷ *Ibid.*

⁴¹⁸ On the Islamic concept of “environmental harm”, see Chapter 4.

⁴¹⁹ Cf. Qur’an, 7:128 and 99:4.

⁴²⁰ On the term “Earth” (*al-arḍ*) and its significance in the Qur’an, see Nurdeng Deuraseh, “Earth in the Holy Qur’an: how to protect and maintain it?” (Paper presented at the Conference on Land Degradation in Dry Environments, Kuwait University, Kuwait, March 8th–14th 2009), accessed May 12, 2015, <http://www.ukm.my/jhadhari/makalah/v2n22010/makalah-v2n2-n4.pdf>.

harmony between humans and earth in submitting to the one Creator. During prayers, the supplicant's head is placed on the earth, accepting that the entire destiny of humanity is in God's power.⁴²¹

Further, he notes that the Arabic word “earth” (*al-ard*) is recurrent in the Quran. According to Izzi Dien, it occurs a total of 485 times, “a simple measure of its importance”.⁴²² Izzi Dien also recalls that the Earth is depicted in the Quran as our immediate environment, which used to be an originally pure and pristine place.⁴²³ The Earth is often mentioned in the Quran in conjunction with Heavens, indicating a cosmological whole — i.e., a space where the spiritual and the corporeal, the visible and the invisible (which is populated with supernatural beings, such as angels and jinns)⁴²⁴ are distinct yet related dimensions. Notwithstanding this peculiar cosmological perspective, the Earth stands out as an independent albeit interrelated whole. Following Izzi Dien's line of thought, since humans are not the Earth's owners, they ought to administer and manage its resources responsibly. The Earth is also presented as the cradle of humanity, a container (*kifāt*), a receptacle, a womb:

Have We not made The earth (as a place) To draw together The living and the dead.⁴²⁵

⁴²¹ Izzi Dien, *The Environmental Dimensions of Islam*, 12.

⁴²² Izzi Dien, “Islamic Environmental Ethics,” 168.

⁴²³ See Qur'an, 27:61.

⁴²⁴ Qur'an, 15:27. The word “jinn” (plural: *jinna*; collective: *jān*; adjective: *jinnī*) is derived from the Arabic verb root J-N-N (“[to] hide, conceal, veil”). In pre-Islamic mythology, as well as in subsequent Islamic theology, Jinns are depicted as supernatural entities, i.e., invisible beings who are neither human nor angelic. Jinns may have either good or evil intentions. More specifically, as stated by the Morocco-based scholar Mohammed Maarouf, “According to the Qur'an, Jinns are born out of fire while human beings are created out of clay, which makes physical contact between them impossible”. See Mohammed Maarouf, “The Buffi Representation of the World of Jinn,” in *Jinn Eviction as a Discourse of Power: A Multidisciplinary Approach to Moroccan Magical Beliefs and Practices* (Leiden, NL: Brill, 2007), 97.

⁴²⁵ Qur'an, 77:25–6.

The main component of the Earth, its soil, is of particular importance. For instance, God made human beings from dust and water, that is, “the clay of the earth”.⁴²⁶ On this point, Izzi Dien comments that “human beings are given value, for instance, from the fact that they are made from the clay of the earth, an often unclean substance that discomforts when it dirties clothes or utensils. Yet this substance is a basic element for the continuity of life”.⁴²⁷

The sacred and purifying nature of land or soil is also emphasised in the Quranic text as well as in the prophetic traditions. For instance, the Islamic ritual of *tayammum*⁴²⁸ (i.e., a type of dry ablution that Muslims may perform in the absence of water “by rubbing one’s hands against clay or sand and passing them over the face and arms”)⁴²⁹ allows the Muslim believer to be ritually pure before prayer or other devotional acts that demand cleanliness.⁴³⁰

In addition, the hadith literature makes reference to a pronouncement of the Prophet Muhammad that has become known among modern Muslim eco-ethics as his “Green Declaration”: “the earth has been created for me as a mosque [i.e., as a place of worship], and as a means of purification” (*Sahīḥ al-Bukhārī*, 1:331).⁴³¹ The Prophetic vision of the Earth as a source of purity (*tahārah*, “cleanliness”) and a sacred place for the worship of God (*masjid*,

⁴²⁶ See Qur’an, 71:17–20. See also Izzi Dien, *The Environmental Dimensions of Islam*, 12.

⁴²⁷ Ibid.

⁴²⁸ “[...] If ye are ill, Or on a journey, Or one of you cometh From offices of nature, Or ye have been In contact with women, And ye find no water, Then take for yourselves Clean sand or earth, And rub therewith Your faces and hands. For Allah doth blot out sins, And forgive again and again” (Qur’an 4:43). See also Islam, “Towards a Green Earth,” 65.

⁴²⁹ See John L. Esposito, “Wudu,” in *The Oxford Dictionary of Islam*, ed. John L. Esposito (New York: Oxford University Press, 2003), 341.

⁴³⁰ Izzi Dien, *The Environmental Dimensions of Islam*, 13.

⁴³¹ See Denny, “Islam”, 244.

“mosque”) is thus interwoven with the moral imperative to ecological reverence and care.⁴³²

In other Quranic verses it is also stated that the types of land available on Earth are generally divided into two main categories: cultivated land and dead land.⁴³³ Land and its fertile soil guarantee sustenance and livelihood not only to human beings but also to all other creatures.⁴³⁴ Therefore, the Islamic teachings about land care and protection recommend that humans do not excessively exploit and degrade soil. This consideration seems to show that land (as well as its forests and wildlife) exists in its own right.⁴³⁵ On many occasions, indeed, the Quran reminds of humans’ role in reviving the Earth and its dead lands (*iḥyā’ al-arāḍī al-mawāt*) with the aim of making unused land habitable and productive.⁴³⁶ Such customary practice is mentioned, for example, in the following Qur’anic verses:

...And if any one saved a life [*iḥyā’*] It would be as if he saved The life [*iḥyā’*] of the whole people.⁴³⁷

...so that We may bring dead land to life thereby, and give to drink thereof to many [beings] of Our creation, beasts as well as humans.⁴³⁸

In discussing this specific issue, the Bangladeshi scholar Muhammad Muinul Islam quotes, for example, the following prophetic teachings:

If anyone cultivates waste land he will have a reward for it, and that which any creature seeking food eats of it will count as sadaqah to him;

⁴³² On this point, see, for example, Ibrahim Abdul-Matin, “Introduction,” in *Green Deen: What Islam Teaches about Protecting the Planet* (Oakland, California: Berrett-Koehler Publishers, 2010), 1–3.

⁴³³ See Qur’an, 13:4.

⁴³⁴ Cf. Qur’an, 17:70. See also Islam, “Towards a Green Earth,” 67–8.

⁴³⁵ Ibid.

⁴³⁶ For a succinct overview of the principle of reviving dead land in the Islamic law, see Izzi Dien, *The Environmental Dimensions of Islam*, 37–41. See also Islam, “Towards a Green Earth,” 69.

⁴³⁷ Qur’an 5:32; as cited in Izzi Dien, *The Environmental Dimensions of Islam*, 38.

⁴³⁸ Qur’an 25:49; as cited in Islam, “Towards a Green Earth,” 69.

Whoever reclaims and cultivates dry, barren land will be rewarded by God for the act. So long as man and animals benefit from it He will record it for him as almsgiving.⁴³⁹

These Islamic rules on Earth management systems are in part codified in the Shariah (*Sharī'ah*) (literally “the path to water”, but improperly referred to as the “Islamic law”).⁴⁴⁰ They include detailed rules on land reclamation, and its accompanying land and water rights, in order to make land suitable for human settlement (by cultivation, pasture and construction of buildings), provided that human beings do not infringe the rights and welfare of other species, such as wild species and all other creatures living either in wildlife habitats or in green areas.⁴⁴¹ This ideological approach to land conservation and care is regarded as typical of Islam’s positive attitude toward the natural environment.⁴⁴² Thus, it may be concluded that, according to a traditional Islamic view, Earth is a sacred place that Muslims ought to treat with reverence and respect. Additionally, all human efforts to take care of earthly resources, as well as to redistribute land to the poorest and the weakest of the (Muslim) community, may ensure environmental sustainability, social peace and economic stability.

Water

[...] We have made from water Every living thing...⁴⁴³

And Allah has created Every animal from water; Of them there are some That creep on their bellies; Some that walk on two legs; And some that walk on four. Allah creates what He wills; for verily Allah has power Over all things.⁴⁴⁴

⁴³⁹ Ibid.

⁴⁴⁰ See Le Gai Eaton, “Islam and the Environment,” 46.

⁴⁴¹ See Izzi Dien, *The Environmental Dimensions of Islam*, 37–41.

⁴⁴² See Islam, “Towards a Green Earth,” 55.

⁴⁴³ Qur’an, 21:30. See also Gada, “Environmental Ethics in Islam,” 132; and Izzi Dien, *The Environmental Dimensions of Islam*, 30.

⁴⁴⁴ Qur’an, 24:45 and 25:54. See also Ali Mohamed Al-Damkhi, “Environmental Ethics in Islam: Principles, Violations, and Future Perspectives,” *International Journal of Environmental Studies* 65, no. 1 (February 2008): 14–5, DOI

According to the Islamic worldview, water is an extremely powerful and valuable element. Therefore, this life-giving, sustaining and purifying resource is both ethically and legally protected in Islam.⁴⁴⁵ The Arabic term “water” (*māʾ*) and all water-made phenomena (rain, river, sea, etc.) occur sixty-six times in the Quran.⁴⁴⁶ Commenting on the Quranic verses related to water, Professor Muhammad Muinul Islam writes:

Water is the primary element that existed even before the heavens and the earth did. It is mentioned in the Qur’an: “And He it is who has created the heavens and the earth in six aeons; and [ever since he Has willed to create life] the throne of His almightiness has rested upon water.” (11:7).⁴⁴⁷

Being an essential, vital and precious natural element that initiates and maintains the cycle of life, water also bears a symbolic value because it is linked both to a physical and moral process of purification.⁴⁴⁸ As stressed by Izzi Dien,⁴⁴⁹ the hydrological cycle is viewed by the fourteenth-century scholar Ibn Qayyim al-Jawziyya (d. 751/1350)⁴⁵⁰ as part of a complex system “consisting of four elements: dust, water, air and fire (*al-uṣūl al-arbaʿa*)”.⁴⁵¹ Thus, water is intimately connected to the creation of human life. In this regard, Muhammad A.

10.1080/00207230701859724, accessed June 7, 2016, <http://dx.doi.org/10.1080/00207230701859724>.

⁴⁴⁵ Islam, “Towards a Green Earth,” 63. See also Izzi Dien, *The Environmental Dimensions of Islam*, 30.

⁴⁴⁶ See Denny, “Islam,” 244.

⁴⁴⁷ Islam, “Towards a Green Earth,” 64.

⁴⁴⁸ Cf. Qur’an, 25:54 and 24:45.

⁴⁴⁹ Izzi Dien, *The Environmental Dimensions of Islam*, 28.

⁴⁵⁰ For a critical analysis of the life and work of the Sunni Ḥanbalī scholar, theologian, jurist, and devoted disciple of Ibn Taymiyya (d. 728/1328) Abū Bakr Muḥammad b. Abī Bakr al-Zurʿī (also known as Ibn Qayyim al-Jawziyya), see Caterina Bori and Livnat Holtzman, eds., “A Scholar in the Shadow: Essays in the Legal and Theological Thought of Ibn Qayyim al-Jawziyya,” *Oriente Moderno Nuova Serie*, Anno XC, no. 1 (Rome: Istituto per l’Oriente C.A. Nallino, 2010), accessed March 18, 2015, http://arabic.biu.ac.il/files/arabic/shared/staff/u16/introduction_-_finalfrontespizio.pdf.

⁴⁵¹ See Qur’an, 30:48.

S. Abdel Haleem (who is currently Professor of Islamic Studies at SOAS, University of London) contends that the Quranic text “involves the reader in what he or she can observe of the processes that generate water and produce its benefits”. To stress this point, he quotes from the Quran, Surah (*Sūrah*) 30, verse 48:

It is Allah who drives the winds that raise the clouds and spreads them along the sky as He pleases and causes them to break up so that you can see the rain issuing out from the midst of them.⁴⁵²

and Surah 25:48:

It is He Who drives the winds, glad tidings heralding His Mercy, and We send down pure water from the sky.⁴⁵³

Water comes, for example, from rain, hail, snow.⁴⁵⁴ As observed by the Malaysia-based Islamic scholar Ibrahim Abu Bakar, the Quran states that water is sent down by God from the sky, meaning that He brought it down in order to make nature flourish and make the vegetation grow “for human beings to feed their cattle”.⁴⁵⁵ A Quranic verse has this to say on this point:

Do you not see that God sends down rain from the sky? With it we then bring out produce of various colours.⁴⁵⁶

In the Quranic text, as further observed by Muhammad Abdel Haleem, there are many verses focusing on the benefits and functions of water.⁴⁵⁷ Fresh water guarantees both human and non-human survival

⁴⁵² See Muhammad A. S. Abdel Haleem, “Water in the Qur’an,” in *Islam and the Environment*, ed. Harfiyah Abdel Haleem (London-New York: Ta-Ha Publishers, 1998), 104.

⁴⁵³ *Ibid.*

⁴⁵⁴ See Izzi Dien, *The Environmental Dimensions of Islam*, 30.

⁴⁵⁵ Abu Bakar, “Islamic Theological Teachings on Ecology,” 224.

⁴⁵⁶ Qur’an, 35:27; as cited in Izzi Dien, *The Environmental Dimensions of Islam*, 32.

⁴⁵⁷ Abdel Haleem, “Water in the Qur’an,” 105.

as long as it is drinkable and uncontaminated.⁴⁵⁸ Rivers,⁴⁵⁹ which depend on sources of fresh water, possess ‘running’ water suitable for “cooling, irrigation and beautification”.⁴⁶⁰ *Bahr* (the Arabic word for “sea”), instead, refers to a large perennial river. In the Quranic text, fresh and sea water are named as *al-bahrayn* (literally, “the two seas”). These two kinds of water, which are presented as God’s gifts and signs of His endless benevolence, are often compared in order to stress their respective features and specific uses.⁴⁶¹ Thanks to God’s will, seawater, which is salty and bitter, is kept separated from fresh water.⁴⁶² The sea occupies a boundless space and contains a huge amount of water, as vividly mentioned in the Quran.⁴⁶³

In the Quran, God reminds Muslims that water is: (1) created and owned by God alone, not by humankind; (2) a clear sign of God’s existence, unity, care and mercy toward all creatures; (3) necessary for the very existence of human/non-human life; (4) proof of the Resurrection;⁴⁶⁴ and (5) an accessible and collectively owned resource⁴⁶⁵ which can be used not only for drinking but also for food, “transportation, energy, employment, recreation, and other economic, social and cultural activities”.⁴⁶⁶ The Quran says in this respect:

⁴⁵⁸ Cf. Qur’an, 15:22; 77:27; and 25:48–9. In the Quran, water is frequently described as a revitalising force that gives new life to dry, dead lands. Ground water and fresh water stored and lodged in soil — which are both considered as precious resources provided by God — are recurrently mentioned in the Quran. See Abdel Haleem, “Water in the Qur’an,” 105–6.

⁴⁵⁹ The Quran is filled with verses where “river” is a recurrent word. The word “river” occurs over fifty times in the Qur’an. See Abdel Haleem, “Water in the Qur’an,” 108.

⁴⁶⁰ *Ibid.*

⁴⁶¹ Cf. Qur’an, 35:12 and 56:65.

⁴⁶² See Qur’an, 25:53.

⁴⁶³ Cf. Qur’an, 52:6 and 18:109. See also Abdel Haleem, “Water in the Qur’an,” 110.

⁴⁶⁴ “He that gives it life will restore the dead to life” (41:30). Abdel Haleem, “Water in the Qur’an,” 114.

⁴⁶⁵ In order to explain this point, the Muslim scholar Izzi Dien quoted the following Qur’anic verse: “Tell them that water is to be divided between them” (Qur’an, 54:28). Izzi Dien, *The Environmental Dimensions of Islam*, 114.

⁴⁶⁶ Islam, “Towards a Green Earth,” 63.

Have you seen the water which you drink? Was it you who sent it down from the rain cloud, or did We send it? Were it Our will, We could have made it bitter; why then do you not give thanks?⁴⁶⁷

God has reminded us, ‘Say: Have you considered, if your water were one morning to have seeped away, who then could bring you clear-flowing water?’⁴⁶⁸

Your sustainer is He who causes ships to move onward for you through the sea, so that you might go about to quest of some of His bounty: verily, a dispenser of grace is He unto you.⁴⁶⁹

Yet, the blissful, healing and saving power of water does not obscure its destructive side.⁴⁷⁰

Furthermore, water plays an important ritualistic role in Islam. Clean water is suitable for ablution and purification (both corporeal and spiritual). As noted by Izzi Dien, it is “a cleansing agent, *tahur*, used in the preparation for prayer, *wudu*’, as well as for a variety of religious actions in Islam”.⁴⁷¹

He sends down water from the sky to cleanse you.⁴⁷²

References to water are also frequent in prophetic teachings. Frederick M. Denny underlines that the Sunni hadith literature puts emphasis on the “personal, communal, civic, agricultural, legal, and commercial dimensions” of water resources.⁴⁷³ Indeed, the Quran and hadiths narrate that essential resources like water are to be shared in common.⁴⁷⁴

⁴⁶⁷ Qur’an, 56: 68–70.

⁴⁶⁸ Qur’an, 67:30; as cited in Al-Damkhi, “Environmental Ethics in Islam,” 14–5.

⁴⁶⁹ Qur’an, 17:66; as cited in Islam, “Towards a Green Earth,” 63. Cf. also Qur’an 12:70, 10:22 and 22:65; as cited in Abdel Haleem, “Water in the Qur’an,” 109–10.

⁴⁷⁰ See Abdel Haleem, “Water in the Qur’an,” 113.

⁴⁷¹ Izzi Dien, *The Environmental Dimensions of Islam*, 13. See also Qur’an, 5:6; 9:108; 74:4; as cited in Abdel Haleem, “Water in the Qur’an,” 107. As mentioned earlier, *wudu*’ is a basic ritual washing that occurs before prayer, whereas *ghusl* is a full ritual bath. On this point, see also Denny, “Islam,” 245.

⁴⁷² Qur’an, 8:11; as cited in Abdel Haleem “Water in the Qur’an,” 107.

⁴⁷³ Denny, “Islam,” 245.

⁴⁷⁴ In Muhammad Muinul Islam’s words, according to the spirit of Islam “nobody is entitled to monopolize water or compel or coerce people concerning its uses”. See

Thus, the Islamic tradition has a long history of rules and regulations on water access, equitable distribution and conservation. The Canadian historian of religions Richard Foltz notes that in an authentic hadith, “Muhammad also decreed that no more than an ankle-depth of water (i.e., the quantity of water sufficient for one season) could be taken for irrigation”.⁴⁷⁵ Another illustrative hadith reported by Ibn Majah and Abu Dawud (3470) says: “Muslims share alike in three things — water, pasture and fire”.⁴⁷⁶ In addition to the virtue of sharing water (even with animals), the human right to quench thirst and the human duty to provide water for animals are emphasised in several hadiths.⁴⁷⁷

On the whole, the Quranic and prophetic teachings prohibit any excessive and wasteful behaviour in using water. The Quran says:

Eat and drink but do not be excessive; He loves not the extravagant.⁴⁷⁸

Abdel Haleem cites, for example, a hadith selected from the collection compiled by al-Tirmidhi, according to which the Prophet said:

Excess in the use of water is forbidden, even if you have resources of a whole river.⁴⁷⁹

Islam, “Towards a Green Earth,” 66. Mawil Izzi Dien says in this respect: “Sea water is available to everyone [...]. The water from large rivers [...] can be freely used by individuals, but irrigation can only be provided as long as the provision does not affect the rights of others. Shared water is that to which several people have access; each has the right to drink from, but irrigation is restricted. Water contained in vessels is regarded as property, although it may be seized in times of shortage”. See Izzi Dien, *The Environmental Dimensions of Islam*, 31.

⁴⁷⁵ See Foltz, “The Globalization of Muslim Environmentalism,” n.p. See also Denny, “Islam,” 245.

⁴⁷⁶ Foltz, “The Globalization of Muslim Environmentalism,” n.p. Cf. Muḥammad ibn ‘Abd Allāh Khaṭīb Al-Tibrīzī (fl. 1337), *Mishkāt al-Masābih; English translation with explanatory notes by James Robson* (Lahore: S.M. Ashraf, 1975).

⁴⁷⁷ See Abdel Haleem, “Water in the Qur’an,” 115.

⁴⁷⁸ Ibid.

⁴⁷⁹ Abdel Haleem, “Water in the Qur’an,” 116.

Similarly, pouring water while bathing or having a shower is not allowed.⁴⁸⁰ Other hadiths provide general rules of conduct for Muslims even when water is abundant (*Musnad* ii, 22); for instance, the excessive use of water is “detestable” (*makrūh*) when it is taken for ritual ablutions:

God’s Messenger appeared while Sa’ad was taking the ablutions. When he saw that Sa’ad was using a lot of water, he intervened saying: ‘What is this? You are wasting water.’ Sa’d replied asking: “Can there be wastefulness while taking the ablutions?” To which God’s Messenger replied: “Yes, even if you take them on the bank of a rushing river.”⁴⁸¹

Furthermore, in the Shariah-based system any act of wasting, polluting and contaminating water (rivers, seas, etc.)⁴⁸² is strictly forbidden.⁴⁸³ In conclusion, the Quranically based moral exhortation to conserve water and, above all, to respect its sacred value in Islam may propel contemporary Muslims to use water sustainably both in the present and the future.

Heaven

As stated by Frederick M. Denny (Professor Emeritus of Islamic Studies and the History of Religions at the University of Colorado at Boulder), it is also noteworthy that the Quran depicts Heaven as a beautiful verdant Garden “under which streams (*anhār*) of pure water flow”.⁴⁸⁴ Paradise, as remarked by Muhammad Abdel Haleem, “is

⁴⁸⁰ On this point, see Islam, “Towards a Green Earth,” 66.

⁴⁸¹ *Musnad*, ii, 22; Ibn Maja, “Tahara,” 48, no. 425; i, 147; as cited in Özdemir, “Towards an Understanding of Environmental Ethics,” 15. On prophetic traditions concerning the reduction of water waste, see Izzi Dien, *The Environmental Dimensions of Islam*, 32.

⁴⁸² The contamination of water bodies (pollution) is condemned by the Prophet: “It was narrated that Hamam bin Munabbih said: “This is what Abu Hurairah narrated to us from Muhammad the Messenger of Allah” and he mentioned a number of hadith including: “The Messenger of Allah said: “Do not urinate into standing water that does not flow, then wash yourself with it” (*Ṣaḥīḥ Muslim*). See Avi and Noureen, “Understanding Ecology Issues,” 46.

⁴⁸³ *Ibid.*

⁴⁸⁴ Denny, “Islam”, 244.

almost always connected to running rivers and ‘is better and more lasting’ (87:17)”.⁴⁸⁵ Human life on Earth is described as the prelude to an eternal afterlife, where faithful Muslims will eventually encounter and live in communion with God, the angels and all their saved fellow Muslims. After this world, all living creatures, including humans, will be gathered to their Lord in a perfectly balanced, peaceful and “green” place. The description of Heaven as a Garden, indeed, is also present in the Judaeo-Christian tradition.

Air

Direct references to air do not seem to be numerous in the Quran. Yet, air (*hawā’*) is regarded as an essential natural element that ensures the continuance and maintenance of life on Earth. Indeed, air (which contains the life-sustaining components oxygen, nitrogen, hydrogen and carbon dioxide) makes the Earth able to support both human and non-human life. Air is also the medium that transports water and sound waves; it carries aromas, heat and cold. Further, the movement of air in the form of wind plays an important role in pollination.⁴⁸⁶ Thus, the Quran states that God created all these non-living components (namely, air, water, minerals, soil) in order to make His creatures (microbes, plants, animals, humans, etc.) prosper and survive. Combined together, these natural elements constitute efficient mechanisms for supporting the life functions of all living organisms.⁴⁸⁷

As noted by Izzi Dien,⁴⁸⁸ for example, “Ibn Qayyim asl-Jawziyya quoted a Tradition from the hadith collection *Al-Muwatta* (*Al-*

⁴⁸⁵ M.A.S. Abdel Haleem, “Water in the Qur’an,” in *Islam and the Environment*, ed. Harfiyah Abdel Haleem (London-New York: Ta-Ha Publishers, 1998), 108–9.

⁴⁸⁶ Qur’an 15:22; 2:164; 7:57. See also Alvi and Noureen, “Understanding Ecology Issues,” 45.

⁴⁸⁷ *Ibid.*

⁴⁸⁸ Izzi Dien, *The Environmental Dimensions of Islam*, 28.

Muwatta'), which emphasised the cyclical nature of evaporation and precipitation". In this respect, the Quran (30:48) says:

It is Allah Who sends the Winds, and they raise the Clouds: then does He spread them in the sky as He wills, and break them into fragments, until thou seest rain-drops issue from the midst thereof: then when He has made them reach such of his servants as He wills behold, they do rejoice!

However, especially in current times, the increasing global presence of air pollutants (e.g., toxic and poisonous gases) in the global atmosphere and the mass felling of trees, plants, and forest reserves all across the world have affected the health and wellbeing not only of human beings but also of entire ecosystems and all the species within them. Therefore, as confirmed by the following hadith attributed to the Prophet, planting trees may be an effective method for improving air quality:

Narrated Anas bin Malik: Allah's Apostle said, "There is none amongst the Muslims who plants a tree or sows seeds, and then a bird, or a person or an animal eats from it, but is regarded as a charitable gift for him."⁴⁸⁹

In conclusion, it can be added that these Islamic references to air and, more specifically, to its protection from pollutants have encouraged some contemporary Muslim scholars to discuss and confront the problem of greenhouse gas emissions from an Islamic standpoint.

*Plants and Animals*⁴⁹⁰

According to contemporary scholars of Islamic eco-ethics, plants deserve respect and care as they are living creatures that praise and worship God, and thus attest to His majesty and goodness. The colour green is given a special status in Islamic culture and symbolism, to the

⁴⁸⁹ Prophet Muhammad, as reported in al-Bukhārī, ḥadīth 2320; as cited in Alvi and Noureen, "Understanding Ecology Issues," 48.

⁴⁹⁰ On biodiversity conservation in Islam, see for example Laxman, Ansari, and Zawawi, "The Islamic Approach to Conserving Biodiversity," 748–64.

extent that it is generally associated with Islam itself as a religion.⁴⁹¹ Green is revered because it is said to be the colour of the Prophet Muhammad's tribe (the Quraysh); it is believed to be the colour of the turban and the garments worn by the Prophet of Islam, as well as the colour of the clothes Muslim believers are dressed in while resting in Paradise (in the "Gardens of Eden"). As the Quran pointedly states:

[...] They will be adorned therein with bracelets of gold, and they will wear green garments of fine silk and heavy brocade [...].⁴⁹²

Green symbolises the natural environment and all forms of life (e.g., plant life). Green is the middle colour of the colour spectrum; thus, it is regarded as symbolising the Islamic call for moderation. Green is also presented as the colour of foliage and fertility.⁴⁹³

Some Islamic scholars contend that the Quran attaches value to plants. For example, some Quranic verses tend toward an emphasis of the aesthetic and decorative functions of vegetation, as well as of their importance for human sustenance and enjoyment.⁴⁹⁴

Ecological interconnectedness is also expressed through the description of plants as a means for the continuation of life. As the Muslim scholar Muhammad Muinul Islam puts it, the richness and diversification of plant species is mentioned in the Quran:

For it is He who has brought into being gardens – [both] the cultivated ones and those growing wild – and the date-palm, and fields bearing multiform produce, and the olive tree, and the pomegranate: [all] resembling one another and yet so different.⁴⁹⁵

⁴⁹¹ See Muhammad Fauzan bin Abu Bakar, "Colours of Islam," *Academia.edu*, 2015, accessed May 17, 2016, https://www.academia.edu/6434115/Colours_of_Islam.

⁴⁹² Qur'an, 18:31; as cited in Izzī Dien, *The Environmental Dimensions of Islam*, 14. Cf. Qur'an, 18:31 with Qur'an, 55:76: "Reclining on green cushions and beautiful fine carpets".

⁴⁹³ Bin Abu Bakar, "Colours of Islam," n.p.

⁴⁹⁴ Islam, "Towards a Green Earth," 70. Cf. also Qur'an 50:7 and 55:10–3.

⁴⁹⁵ *Ibid.*; see Qur'an, 6:141.

The Quran recognises that as food, plants are an indispensable source of nutrition. Of course, thanks to the presence of plants on the Earth, human sustenance and nourishment are guaranteed and secured.⁴⁹⁶ Additionally, plants (and forests) have economic, ecological and healing functions.⁴⁹⁷ As indicated in the Quran, forests are granted by God for human benefit:

Have you ever considered the fire that you kindle? Is it you who grow the tree which feeds the fire or are We the Grower? We have made it a reminder for man as to what would be the life without it, and a provision of life for the travelers of desert.⁴⁹⁸

Symbolically, in *Sūrat at-Tīn* (“The Fig”, 95), an indirect parallel is made between two plants, namely the fig and the olive, and two sacred lands, Mount Sinai and Mecca, respectively. The Islamic scholar Izzī Dien first untangles the meaning of fig, which may be considered as a “symbol of human destiny that can be either good or bad. For a fig, when cultivated, is one of the finest fruits, but in the wild can easily become infested by maggots, while the olive represents the source of oil, providing a pure light”.⁴⁹⁹ In his view, these two plants retain sacred aspects that are fully consistent with the Islamic doctrinal apparatus, according to which God is the Creator of a balanced system whose elements serve and harmoniously interact with each other:

And Thy Lord taught the Bee To build its cells in hills, On trees, and in (men’s) habitations.⁵⁰⁰

⁴⁹⁶ Cf. Qur’an, 80: 24–32 and 50:9–11.

⁴⁹⁷ Islam, “Towards a Green Earth,” 70–1.

⁴⁹⁸ Qur’an, 56:7; as quoted in Islam, “Towards a Green Earth,” 71.

⁴⁹⁹ Izzī Dien, *The Environmental Dimensions of Islam*, 14.

⁵⁰⁰ Qur’an, 16:68. On this point, see also Yūsuf Al-Qaraḍāwī, *Al-Sunnah Maṣḍar li’l-Ma’rīfah wa’l-hadhārah*, 3rd edn. (Al-Qāhirah: Dār al-Shurūq, 2002), 143–4.

Hence, he argues that all natural products obtained from ecosystems (e.g., the honey produced by bees) should be taken care of because of their healthy attributes and medicinal value.⁵⁰¹

Ultimately, the Islamic worldview, as interpreted by Islamic jurists and scholars, forbids any direct/indirect damage, destruction of plants and forests — either in the case of deforestation, i.e. the felling of wild trees and plants, or indirect damage through acid rain. According to hadith collections, Islam encourages Muslim believers to plant, nurture and protect trees and all other plants, since God will reward those who take care of them as acts of worshipping.⁵⁰² For instance, a hadith of the Prophet says in this respect:

He who cuts a lote-tree [without justification], God will send him to Hellfire.⁵⁰³

Muhammad's saying: "When doomsday comes, if someone has a palm shoot in his hand, he should plant it"⁵⁰⁴ legitimises eco-friendly and sustainable practices. Professor Frederick M. Denny, commenting on this hadith, observes that:

whether one plants a palm shoot as the end is closing in or invests in an environmentally sound way of life for the sake of posterity, it comes to the same thing: serving God through a stewardship that reflects what the Quran throughout sets forth as God's generosity, mercy, and guidance in the first place.⁵⁰⁵

According to other canonical Sunni hadith collections, planting a tree is considered as an act of almsgiving before God for the Muslim who planted it.⁵⁰⁶ In sum, it can be said that, according to the Islamic

⁵⁰¹ Ibid.

⁵⁰² See Islam, "Towards a Green Earth," 73.

⁵⁰³ Ibid.

⁵⁰⁴ See Ahmad Ibn al-Ḥusayn al-Bayḥaqī, *Sunan al-Bayhaqī al-Kubrā* (Hyderabad, India: n.d.), 3:19; as cited in Izzi Dien, "Islamic Environmental Ethics," note 18.

⁵⁰⁵ See Denny, "Islam", 244.

⁵⁰⁶ See *Ṣaḥīḥ al-Bukhārī*; as cited in Islam, "Towards a Green Earth," 74 and note 92.

view, plants are valuable for the multiple functions they perform, as well as for the ecological role they play.

*Animals and animal rights*⁵⁰⁷

Some contemporary scholars in the field of Islamic eco-ethics argue that according to Islam all living creatures, which we commonly identify as species, play a prominent role in God's Creation. They are explicitly mentioned in the Quranic text, which describes them as the Signs of God.⁵⁰⁸ The Quran vividly says in this respect:

And among His signs is the creation of the heavens and the earth and the living creatures that he has scattered through them.⁵⁰⁹

The earth He has assigned to all living creatures.⁵¹⁰

Interestingly, in the Quran several Suras are named after common animal names (*al-Baqarah*, "the Cow"; *al-Nahl*, "the Bee"; *al-Anqabūt*, "the Spider"; *al-Naml*, "the Ant").⁵¹¹ Non-human communities (e.g., animal kingdoms) are described as nations (*umam*, "communities") similarly to the human nation: "like us, are worthy of respect and protection".⁵¹² Additionally, animals somehow possess speech⁵¹³ and, as remarked by the North American Islamic eco-scholar Richard C. Foltz:

⁵⁰⁷ For a general outline of the Islamic view on animals, see for example Al-Hafiz B.A. Masri, *Islamic Concern for Animals* (Petersfield, Hants, England: Athene Trust, 1987); and Izzi Dien, *The Environmental Dimensions of Islam*, 25–6.

⁵⁰⁸ See Qur'an, 42:29.

⁵⁰⁹ Qur'an, 42:29; as cited in Islam, "Towards a Green Earth," 75.

⁵¹⁰ Qur'an, 55:10.

⁵¹¹ See Özdemir, "Towards an Understanding of Environmental Ethics," 25; and Islam, "Towards a Green Earth," 75.

⁵¹² Izzi Dien, "Islamic Environmental Ethics," 159. The Quran says: "There is not an animal that lives on earth, nor a being that flies on its wings, but forms part of communities like you. Nothing have we omitted from the Book, and they all shall be gathered to their Lord in the end" (Qur'an, 6:38). See also Islam, "Towards a Green Earth," 75.

⁵¹³ See Qur'an, 27:17–22.

Non-human animals are said to have received divine revelation, as when God instructs bees on how to make honeycombs and honey (16:68). The earth was created for the benefit of all living beings (*anām*), not for humans alone (55:10). In fact, the only significant difference between humans and other beings is that humans alone possess consciousness (*taqwà*), and are thus accountable for their actions.⁵¹⁴

God is the Sustainer of all living beings (*anām*), animals included, which live on the Earth and benefit from its resources.⁵¹⁵ Numerous hadiths allude to the Prophet Muhammad's charitable and kind attitudes toward non-human beings, especially animals and birds.⁵¹⁶ In Muhammad Muinul Islam's words,

The Prophet Muhammad (peace and blessings be upon him) thus enjoined the protection of animals and birds, that they should not be ill-treated, but should be well-looked after and kept clean, and employed in work suitable to their natures and should not be loaded with burdens greater than they can bear".⁵¹⁷

Although the killing of domestic animals for food is allowed in Islam (*halāl*), minimising animal suffering while slaughtering them is given precedence over human exploitation and material benefit. The Prophet instructed his followers to "slaughter animals with a sharp knife", and "not to slaughter an animal within view of its kin".⁵¹⁸ At the time of the Prophet, hunting as a hobby was seen as a disregardful and disrespectful act.⁵¹⁹ Furthermore, the Prophetic tradition incites Muslims to "plant trees and cultivate land not only to provide food for humans, but for birds and other animals as well (*Ṣaḥīḥ al-Bukhārī*,

⁵¹⁴ Foltz, "The Globalization of Muslim Environmentalism," n.p.

⁵¹⁵ Qur'an, 11:6. On this point, see also Özdemir, "Towards an Understanding of Environmental Ethics," 26.

⁵¹⁶ Foltz, "The Globalization of Muslim Environmentalism," n.p.; on the prophetic teachings about animal care and protection, see also Islam, "Towards a Green Earth," 76–7.

⁵¹⁷ Islam, "Towards a Green Earth," 77.

⁵¹⁸ *Ṣaḥīḥ Muslim*, 2/11, "Slaying," 10:739.

⁵¹⁹ *Ibid.*

3:513)".⁵²⁰ Commenting on hadiths concerning animal protection and welfare, Charles Le Gai Eaton states:

There is hadith (report) concerning a woman who was condemned for shutting up a cat and allowing it to starve to death, of a prostitute who was pardoned for saving the life of a thirsty dog. Another concerns a prophet of earlier times who has an ants nest burned because an ant stung him and whose Lord reproached him saying: 'You have destroyed a community which praised Me!'.⁵²¹

Shariah⁵²² gives morally binding protection to non-human beings (e.g., animals, fish, birds, etc.). The human respect for animals is enshrined in the so-called "right of thirst" (*haqq al-shurb*). This right dictates that animals ought not to be denied fresh drinking water.⁵²³ Both Richard Foltz and Izzī Dien mentioned a thirteenth-century work by 'Izz al-Dīn ibn 'Abd al-Salām (577/1181–660/1262), *Qawā'id al-ahkām fī masālih al-anām* ("Rules for Judgment in the Cases of Living Beings"), which bears a resemblance to "an animals' bill of rights".⁵²⁴ Although the Islamic method of animal slaughtering has been object of criticism by some animal rights activists, Islamic prescriptive calls for animal rights, indeed, resemble those advanced by present-day animal rights movements.⁵²⁵

⁵²⁰ Foltz, "The Globalization of Muslim Environmentalism," n.p.

⁵²¹ Le Gai Eaton in Abdel Haleem 1998, 46.

⁵²² Although it provides detailed moral and legal instructions for believers to follow, Shariah is not a legal code. On this point, see *Eyewitness Companions: Religions: Religions*, Philip Wilkinson, p. 134.

⁵²³ See Qur'an, 91:13.

⁵²⁴ See 'Izz al-Dīn Ibn 'Abd al-Salām (577/1181–660/1262), *Qawā'id al-ahkām fī masālih al-anām* ("Rules for Judgment in the Cases of Living Beings") (Dimashq: Dār al-Ṭabbā', 1992); as cited in Izzī Dien, *The Environmental Dimensions of Islam*, 46. As noted by Izzī Dien, "among the provisions are that animals should be properly cared for, not overburdened, kept safe from harm, given clean shelter, and allowed to mate". Izzī Dien, *The Environmental Dimensions of Islam*, 45–6. See also Foltz, "The Globalization of Muslim Environmentalism"; and idem, *Animals in Islamic Traditions and Muslim Cultures* (Oxford: Oneworld Publications, 2014).

⁵²⁵ In a nutshell, animal rights movements are social movements whose public campaigns seek to promote and ensure kind and fair treatment of animals.

2.3. Islamic eco-approaches and pioneering efforts

Now that we have an overview of Islamic “theological eco-ethics”, a detailed outline of its scholarly elaboration shall be given. The first generation of Islamic eco-theologian-intellectuals (1970s–early 2000s), as noted by Schwencke,⁵²⁶ includes authors who have studied the cosmological model and the ecological dimensions of Islam by referring to basic principles and concepts derived from the traditional Islamic sources of Quran and Sunnah. By contrast, a second generation of scholars (2000–2015) has specifically focused on the ‘performative’ aspects of the Islamic “theological eco-ethics”, and above all on its revolutionary power to engage Muslim global civil society in a way that could inspire both personal and social action for sustainability.⁵²⁷

Among the pioneers of the first current school of thought, there is the famous Iranian-American philosopher Seyyed Hossein Nasr (b. 1933), whose authoritative work has also contributed to the scholarly debate around the “Lynn White thesis” (see par. 1.2). Unlike White, he does not blame monotheistic religions for the current global ecological crisis. Nasr, who is considered as the founding father of contemporary Islamic thought, as well as the main representative of the mystical-Sufi and eco-philosophical approach to “eco-Islam”,⁵²⁸ argues that Islam is

⁵²⁶ See Schwencke, *Globalized Eco-Islam*, 10.

⁵²⁷ See Schwencke, *Globalized Eco-Islam*, 9. In addition, the unfamiliar yet crucial expression “greening Islam” refers to the various social and political processes through which Islam may become “an aspect of social dissent in a quest for eco-justice rather than supportive of established orders”. See Petersen, “Religion and the Quest for Equity,” 202.

⁵²⁸ Seyyed Hossein Nasr, as stated by Richard C. Foltz, “claims to have anticipated White’s critique in his own earlier lectures given at the University of Chicago”. On this point, see Seyyed Hossein Nasr, *Religion and the Order of Nature* (New York: Oxford University Press, 1996), 225, note 12; as cited in Foltz, “Islamic Environmentalism in Theory and Practice,” 359. See also Seyyed Hossein Nasr, *The Encounter of Man and Nature*, cit.; “Islam and the Environmental Crisis” in *Spirit and Nature: Why the Environment is a Religious Issue*, eds. Steven C. Rockefeller and John C. Elder (Boston M.A.: Beacon Press), 83–108. Seyyed Hossein Nasr is also a key figure within the Catholic Muslim Forum set up by the Holy See and by a group

one of the most important “authentic religions” that could help people confront the environmental crises of our time. White and Nasr, however, agree in placing the blame of this crisis on the contemporary scientific paradigm which, according to them, is dominated by a secularist worldview that has marginalised the human experience of the sacred in nature.⁵²⁹ As explained by the anthropologist and Islamic expert Arthur Saniotis, Nasr maintains that: (a) human reflection on the origin of the cosmos “is a key method in enacting responsibility” and stewardship over nature; (b) Islamic anti-materialistic metaphysics and meta-science ought to be restored in order to effectively “tackle the thematic and practical issues of ecology”.⁵³⁰ Nasr recognises the sacred value of nature, contemplates balance and order in the Universe, and, more importantly, emphasises the spiritual aspects of ecological thought. Nasr, together with Muslim and non-Muslim theologians and scholars working in the academic sub-field called “Islam and ecology”,⁵³¹ thus insisted that the ecological crisis we are currently

of Sunni Muslim leaders in 2008. For discussion of this aspect, see, for example, Tarik M. Quadir, *Traditional Islamic Environmentalism: The Vision of Seyyed Hossein Nasr* (Lanham, MD; Plymouth, U.K.: Rowman & Littlefield Publishers/University Press of America, 2013).

⁵²⁹ See Ibrahim Shogar, “Reconstruction of the Worldview as Strategy of Environmental Survival and Sustainability,” in *Survival and Sustainability: Environmental concerns in the 21st Century*, eds. Hüseyin Gökçekus, Umut Türker, and James W. LaMoreaux (Heidelberg, Dordrecht, London, New York: Springer Science & Business Media, 2011), 754.

⁵³⁰ See Afrasiabi, “Toward an Islamic Ecotheology,” 369. See also Saniotis, “Muslims and ecology,” 166.

⁵³¹ Mawil Yusuf Izzi Dien Al-Samarrai and Othman Abd-ar-Rahman Llewellyn, two major contemporary Islamic scholars, have contributed to several publications about Islamic perspectives on the environment. See, for example, Mawil Y. Izzi Dien, “Environmental Protection and Islam,” *Journal of the Faculty of Arts, King Abdul Aziz University* 5 (1985): 35–43; and idem, “Islamic Environmental Ethics, Law, and Society,” in *Ethics of Environment and Development: Global Challenge and International Response*, ed. J. Ronald Engel and Joan Gibb Engel (Tucson: University of Arizona Press, 1990), 189–98; “Islamic Ethics and the Environment,” in *Islam and Ecology*, ed. Fazlun Khalid and Joanne O’Brien (New York: Cassell, 1992), 25–35; *The Environmental Dimensions of Islam*, cit.; “Islam and the Environment: Theory and Practice,” *Journal of Beliefs & Values* 18, no. 1 (1997): 47–58. Among the leading scholars in this field, it is also worth remembering Syed Nomanul Haq (Karachi,

experiencing on a global scale is a crisis of values, that is to say, a deeply moral crisis.⁵³² Nasr, according to Adi Setia, contends that in order to prevent, or at best dispel, the dangers posed, for example, by those attempting to plunder earthly resources for mere functional or utilitarian purposes, a deep *spiritual renewal* is what individual Muslims in particular and humanity in general need to work toward. In his view, the motivation to plunder our earthly resources is mostly dictated by arrogance, carelessness, and lack of self-restraint, as well as by selfish and greedy attitudes, or by an excessive attachment to material objects and gains. Consequently, Muslims and all other people of faith are asked to be at the forefront of calling for a radical reform of human attitudes toward the non-human world.⁵³³ In Nasr's opinion, all these attitudes and behaviours are the outward (*aẓ-ẓāhir*) manifestations of the psychological imbalance and devastation of the human inner (*al-bāṭin*), which inflicts the same imbalance and devastation upon nature itself.⁵³⁴ Therefore, Nasr argues, an "ecological conversion", that is, an ideal life of moderation and devotion to God, combined with a Muslim's general "attitude of gentleness to the earth, to nature, to the natural environment," may accentuate "the true believers' attitude of *peacefulness* to people, to societies, to communities, to cultures, for when the foolish (or ordinary folks) address them, they respond with

Pakistan), İbrahim Özdemir (Turkey, Ankara) and Safei Eldin Hamed (Pittsburgh, PA, USA). See, for example, Syed Nomanul Haq, "Islam and Ecology: Toward Retrieval and Reconstruction," *Daedalus* 130/4 (2001): 141–78; and idem, "Islam," in *A Companion to Environmental Philosophy*, ed. Dale Jamieson (Oxford, UK; Malden, Mass., USA: Blackwell, 2003), 111–29. See also İbrahim Özdemir, *The Ethical Dimension of Human Attitudes Towards Nature: A Muslim Perspective* (Merter/Istanbul: İnsan Publications, 2nd edn., 2008).

⁵³² A similar opinion is expressed in Iqtidar H. Zaidi's paper, "On the Ethics of Man's Interaction with the Environment: An Islamic Approach," *Environmental Ethics* 3, no. 1 (Spring 1981): 35–47.

⁵³³ See Setia, "The Inner Dimension of Going Green," 125.

⁵³⁴ See Setia, "The Inner Dimension of Going Green," 119.

“peace” (*qālū salāman*)”.⁵³⁵ As stated by Schwencke, Nasr’s eco-theory adopts an integral, integrative and holistic worldview resembling that of some secular eco-philosophies (notably, “deep ecology”⁵³⁶):

“His [Nasr’s, editor’s note] thought is an intriguing fusion of Persian shi’ite gnostic and Ibn Arabian mysticism and a Western school of thought, Traditionalism or Perennial Philosophy of Fritjof Schuon (Rene Guenon and others). Nasr’s environmental thought can also be shown to draw on early twentieth century American or New England Transcendentalism. There is a strong affinity with ‘deep ecology’ currents. His thought can be contextualized as part of a wider counter current of (Western) thought with long historical roots (‘esotericism’).”⁵³⁷

In almost the same period (late 1970s-early 1980s), other scholars became interested in the Islam-ecology nexus from an “Islamic science” perspective. Ziauddin Sardar, a London-based independent writer and scholar,⁵³⁸ and S. Parvez Manzoor, a Stockholm-based writer and intellectual,⁵³⁹ are regarded as the most illustrious authors in this scholarly field. Professor Nasr, together with these two Muslim eco-thinkers, has examined the ecologically destructive impact of modern science and technology on contemporary (Muslim) societies.⁵⁴⁰ For example, following S. Parvez Manzoor’s line of reasoning, the current

⁵³⁵ Setia, “The Inner Dimension of Going Green,” 121.

⁵³⁶ For further information on deep ecology from an Islamic perspective, see Nawal H. Ammar, “Islam and Deep Ecology,” in *Deep Ecology and World Religions: New Essays on Sacred Ground*, eds. David Landis Barnhill and Roger S. Gottlieb (Albany, NY: State University of New York Press, 2001), 193–211. For a more general overview, see A.R. Agwan, “Toward an Ecological Consciousness,” *The American Journal of Islamic Social Sciences* 10, no. 2 (1993): 238–48.

⁵³⁷ Schwencke, *Globalized Eco-Islam*, 11.

⁵³⁸ Ziauddin Sardar (official website), accessed May 8, 2016, <http://ziauddinsardar.com/>.

⁵³⁹ S. Parvez Manzoor (official website), accessed May 8, 2016, <http://pmanzoor.info/Index1.html>.

⁵⁴⁰ Schwencke, *Globalized Eco-Islam*, 12–3. On the Islamic mystical-philosophical view on ecological issues proposed by Seyyed Hossein Nasr, see for example Anne Marieke Schwencke, “Seyyed Hossein Nasr: Traditionalism, Islamic Esotericism and Environmental Ethics” (BA thesis, Leiden University, The Netherlands, June 2009). See also Özdemir, “Towards An Understanding of Environmental Ethics,” 3–37; and Ziauddin Sardar, *The Touch of Midas*, cit.; and idem, *Islamic Futures*, cit.

eco-crisis directly reflects the spiritual and teleological crisis of modern civilisation.⁵⁴¹ He affirms that the modern-capitalistic culture of the West has provided legitimation for the perpetual exercise of instrumental reasoning. Accordingly, the scientifically and technologically advanced industrial societies of the world have abundantly relied on instrumental reason.⁵⁴² In his view, this type of rationality has paved the way for the spread of unconstrained economic growth, which reflects a materialist and consumerist-individualist vision of human progress. In addition, he contends that the transnational expansion of this exploitative logic is one of the main determinants of present-day global ecological devastation. However, the destructive power of the ecological crises, which are said to threaten the health and integrity of the planet at the expense of this and future generations of living/non-living and human/non-human beings, can be reversed. As further explained by S. Parvez Manzoor, in order to put restraints on these ecologically harmful trends, a larger part of which are due to anthropic causes, an explicitly Islamic model of ecological science may offer new solutions to the various sustainability problems that we are all facing in current times.

Since the turn of the new millennium, a second generation of Islamic eco-scholar-activists has started to emerge. What distinguishes the second generation from the first is the latter's call for an explicitly Islamic ethical reorientation directed either at taking practical eco-action or at encouraging grassroots social mobilisation for sustainability

⁵⁴¹ Manzoor, "Environment and Values," 162. On this topic, see also Val Plumwood, *Environmental Culture: The Ecological Crisis of Reason* (New York: Routledge, 2002).

⁵⁴² Charles Taylor defined the latter as "the kind of rationality we draw on when we calculate the most economical application of means to a given end. Maximum efficiency, the best cost-output ratio, is its measure of success". See Charles Taylor, *The Malaise of Modernity* (Canada: House of Anansi Press, 1991), 5.

in predominantly Muslim contexts.⁵⁴³ For example, faith-based nature conservationists, as explained by Schwencke, have used Shariah-based principles and institutions to reframe the activities of some (international) conservation organisations (e.g., the World Wildlife Fund – WWF, and the International Union for the Conservation of Nature – IUCN).⁵⁴⁴ Likewise, the most important Islamic international institutions and organisations have proposed an Islamic framework for sustainable development (See par. 2.4 below).⁵⁴⁵ Other Islamic eco-scholar-activists, however, argue that the endorsement of an Islamic path to eco-ethics is chiefly supposed to lead contemporary Muslims and their respective societies toward social change and *socio-ecological transitions*.⁵⁴⁶ Interestingly, contemporary Islamic ecological worldviews do not make a sharp distinction between environmental and

⁵⁴³ Fazlun Khalid, who is the founder-director of the UK-based Islamic Foundation for Ecology and Environmental Sciences (IFEES), is one of the earliest proponents of this second perspective. See also Jenkins, “Sustainability,” 108–10.

⁵⁴⁴ Schwencke, *Globalized Eco-Islam*, 61.

⁵⁴⁵ *Ibid.*

⁵⁴⁶ “In a socio-ecological transition, what is changing is not just the source of energy and technologies, but many other features of society change as well: the economy, the demography, the settlement patterns, the social relations and the very make-up of human personalities. In co-dependence, the natural environment changes, partly resulting from deliberate interventions, partly as unintended side-effects of society’s practices”. Marina Fischer-Kowalski et al., *Socio-ecological Transitions: Definitions, Dynamics and Related Global Scenarios*, NEUJOBS, Global Scenarios/ Milestone no. 3, Working paper/D 1.2 (2012), accessed May 7, 2016, <http://www.neujobs.eu/publications/socio-ecological-transition-and-employment-implications/socio-ecological-transitions-de>. See also Éloi Laurent and Philippe Pochet, “Towards a social-ecological transition: Solidarity in the age of environmental challenge,” The European Trade Union Institute (ETUI), 2015, accessed March 8, 2016, <http://www.etui.org/Publications2/Guides/Towards-a-social-ecological-transition.-Solidarity-in-the-age-of-environmental-challenge>. For a detailed analysis of the notion of socio-ecological systems, see Niki Frantzeskaki, Els van Daalen, and Jill H. Slinger, “Detecting and directing socio-ecological transitions: A transition management approach” (Paper presented at the International Society of Ecological Economics, 8th International Conference ISEE 2008 “Nairobi: Applying Ecological Economics for social and environmental sustainability,” Nairobi, Kenya, August 7th–11th, 2008), accessed May 9, 2016, http://www.tbm.tudelft.nl/fileadmin/Faculteit/TBM/Over_de_Faculteit/Afdelingen/Afdeling_Multi_Actor_Systems/Sectie_Beleidsanalyse/Medewerkers/Niki_Frantzeskaki/doc/ISEE2008_paper.pdf.

eco-justice ethics. As a result, environmental justice struggles are never detached from social and economic justice issues. Indeed, as we will see in par. 2.5, there are good grounds for the reader to dive into the global ‘green sea’ of religiously-inspired sustainability movements operating in Muslim-majority countries and in all parts of the world where Muslims live and work. These new social movements for sustainability are often supported by Muslim NGOs and Islamic charitable organisations, as well as by civil society groups and globally networked individuals and communities. Interestingly, these various actors are participating in deliberative-democratic processes of socio-ecological change at different political, institutional and societal levels.⁵⁴⁷ Still, it is hard to understand what an effective transition toward sustainability really is. Transitions can generally be defined as structural transformations through which a society (or a subsystem of it) struggles to change its political-institutional patterns and policy-making models, as well as its socio-economic and cultural environment; however, the peculiarity here is that this far-reaching reorientation often intervenes in reaction to well-circumscribed problems of sustainability (e.g., pollution, soil erosion, biodiversity loss, etc.). Clearly, all these sweeping processes of transformation require fundamental changes in the structures (e.g., organisations, institutions), cultures (e.g., norms, behaviour), and practices (e.g., routines, skills) of a given societal system.⁵⁴⁸

⁵⁴⁷ See, for example, Jan Rotmans, René Kemp, and Marjolein van Asselt, “More Evolution than Revolution: Transition Management in Public Policy,” *Foresight* 3, no. 1 (February 2001): 16–7. See also Jan Rotmans, “Societal Innovation: Between Dream and Reality Lies Complexity,” DRIFT Research Working Paper, June 3, 2005.

⁵⁴⁸ See Niki Frantzeskaki and Hans De Haan, “Transitions: Two Steps from Theory to Policy,” *Futures: The Journal of Policy, Planning and Futures Studies* 41, no. 9 (November 2009): 594, accessed February 7, 2016. DOI10.1016/j.futures.2009.04.009.

In conclusion, the new generation of contemporary Islamic eco-theologians and eco-activists have embarked on the challenge of critically re-reading the Islamic doctrinal-theological heritage in order to find suitable ethical and practical grounds to settle the ecological problems facing Muslim societies and the Earth community at large.⁵⁴⁹ Thus, the above-mentioned Islamic eco-thinkers have drawn attention to the need for a serious reconsideration of Islamic spiritual and practical resources. In their view, such faith-based resources may help Muslim believers reject the so-called ‘decentralisation’ of humankind from the natural world in three basic ways: (1) by recognising the intrinsic worth and dignity of all earthly creatures; (2) by readdressing the Islamic duty and responsibility for ecological care and nature protection/conservation; and (3) by inspiring Muslim environmentalism.⁵⁵⁰

2.4. Islamic “green” voices within international and ecumenical arenas

In addition to individual eco-thinkers, international environmental institutions and organisations, faith- and interfaith-based institutions and organisations (and their respective leaders), as well as national governments and regional institutions all around the world have played a visible role in discussing global environmental or sustainability issues since the last two decades of the twentieth century. Because of this deep interest in faith-based ecology, some Islamic scholars and intellectuals engaged in the so-called ‘eco-Islamic movement’ have taken part in international committees and ecumenical conferences dedicated to global sustainability themes, linking together

⁵⁴⁹ See, for example, Muzammal Hussain, “Environmental Perspectives: Islam and Ecologism,” 2004 [online], accessed May 16, 2016, <http://wisdominnature.org/resources/islamiccecolgy/>.

⁵⁵⁰ On this point, see, for example, Gottlieb, *A Greener Faith*, 42.

Earth care, humanitarian care, and ecologically responsible religious-spiritual practices.

In the early 1980s, the Saudi government was among the first that tried to revive Islamic ecological values and principles as a matter of national and international policy. The MEPA Agency (the Saudi Meteorological and Environmental Protection Administration) contributed to the elaboration of the *Islamic Principles for the Conservation of the Natural Environment (IPCNE)*.⁵⁵¹ Co-published with the International Union for Conservation of Nature (IUCN) in 1983, this document was republished several times and re-edited in 1994 by a group of Islamic scholars and nature conservationists. Overall, it pushes for Shariah-based ecological legislation, governance systems and practices.⁵⁵² The IPCNE seemed to reflect the views of the first generation of Islamic eco-thinkers who had sought to identify and analyse the basic principles and values of Islamic eco-ethics (see par. 2.3 above). The 1983 document comprises five Sections. In Section I, the four authors (Bagader, Al-Sabbagh, Al-Glenid and Izzi Dien) illustrate the Islamic cosmological doctrine, as well as the Islamic view on nature, natural resources, and the relationship between humanity and nature. Section II is dedicated to the presentation of the Islamic rules for the protection of basic natural elements (water, air, plants, and animals). Section III reports on the protection of humans and the environment from external harm (e.g., pollution, extreme weather events). Section IV is a description of Shariah-based rules for environmental protection and conservation. The last Section contains concluding remarks. In 1986, the World Muslim League issued the

⁵⁵¹ Abubakr Ahmed Bagader et al., *Islamic Principles for the Conservation of the Natural Environment (IPCNE)* (Gland, Switzerland and Cambridge, UK: IUCN, 1983); and idem, "Environmental Protection in Islam," cit.

⁵⁵² See also Schwencke, *Globalized Eco-Islam*, 14–6.

Assisi Muslim Declaration, followed in 1995 by the *Islamic Faith Statement*.⁵⁵³ The two above-mentioned documents spell out the pillars of an Islamic “eco-ethics” (unity, balance, stewardship, trusteeship, accountability, natural state, etc.), as well as the practice-oriented “eco-rules and injunctions” prescribed by Shariah (cf. Chapters 2 and 4). Besides that, these documents marked the formal involvement of the world’s religions, and especially of Islam, in the global debate on ecological issues.⁵⁵⁴

The nineties were characterised by an increased academic and international focus on the Islamic teachings on nature conservation and protection. Furthermore, this topic attracted the interest of a group of Islamic scholars (Bagader, Izzi Dien, Llewellyn) belonging to the first generation (see par. 2.3 above). In their view, Shariah is a fundamental ethical-juridical system that contains several rules for the sustainable management and protection of environmental resources. The 1992 *WWF Series on the World Religions and Ecology* included a volume entitled *Islam and Ecology*, which was edited by Joanne O’Brien and Fazlun Khalid. The latter is a UK-based Muslim eco-scholar-activist who has since become the leading representative of the second generation of Islamic eco-thinkers (see par. 2.3 above). The aim of that work was to embrace a wider audience of Muslim/non-Muslim readers, Islamic scholars and lay people, in order to make them aware of the ecological dimensions of Islam.

In the mid-1990s, the Religion and Ecology scholarly platform invited Muslim/non-Muslim Islamic scholars and activists in the field to publish works, suggest publications, or help organise conferences

⁵⁵³ See Schwencke, *Globalized Eco-Islam*, 16.

⁵⁵⁴ *Ibid.*

regarding the relationship between Islam and ecology (see par. 1.2).⁵⁵⁵ In the same period, as discussed by Schwencke,⁵⁵⁶ the Alliance of Religions and Conservation (ARC) collaborated with WWF and the World Bank on several projects aimed at fostering faith-based practices of environmental conservation and protection. Previous publications concerning Islamic ecological principles (the 1994 IPCNE Islamic Principles, for example) and similar documents dealing with Islamic environmental law and governance were thus taken into consideration by those organisations.⁵⁵⁷

At the turn of the century, the UN's development conferences and international events set the official global agenda on the environment and, above all, on *sustainable development*, precipitating the UN-hosted Millennium Summit of September 2000. At the end of that important international meeting, which gathered together 189 member states of the United Nations, world leaders adopted the *Millennium Declaration*,⁵⁵⁸ a UN document setting out eight time-bound targets to be achieved by 2015 (Millennium Development Goals, MDGs).⁵⁵⁹ Of these Goals, one (7. "Ensure Environmental Sustainability") pertained to ecological issues.

⁵⁵⁵ Here we recall the 1998 *Islam and Ecology* conference and the book *Islam and Ecology: A Bestowed Trust*, which was published in 2003.

⁵⁵⁶ Schwencke, *Globalized Eco-Islam*, 23.

⁵⁵⁷ Schwencke, *Globalized Eco-Islam*, 23–7.

⁵⁵⁸ UN General Assembly, *United Nations Millennium Declaration, Resolution Adopted by the General Assembly*, September 18, 2000, A/RES/55/2, accessed February 9, 2015, <http://www.un.org/millennium/declaration/ares552e.pdf>.

⁵⁵⁹ MDG no. 7: "Ensure Environmental Sustainability". See United Nations, "News on Millennium Development Goals," [online] accessed February 9, 2015, www.un.org/millenniumgoals. The new 2030 Agenda for Sustainable Development comprises seventeen Sustainable Development Goals and their related targets. See UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development, Resolution adopted by the General Assembly*, September 25, 2015, A/RES/70/1, accessed October 9, 2015, http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E.

Two years later, in 2002, the UN organised the World Summit on Sustainable Development (WSSD), also known as the Earth Summit II or Rio +10 in Johannesburg. Almost 21,000 participants, including the representatives of over 191 governments, discussed five areas of major global interest: Water, Energy, Health, Agriculture, and Biodiversity (WEHAB). The *Johannesburg Declaration on Sustainable Development*⁵⁶⁰ and its *Plan of Implementation* paid particular attention to global water security and poverty eradication. These wholly ‘secular’ political documents focused on other crucial issues, such as energy production and consumption, global health problems, and sustainable access, use and management of global natural resources. Within this evolving context, the Organisation of the Islamic Conference (OIC) and the Meteorology and Environment Protection Administration (MEPA) of the Kingdom of Saudi Arabia,⁵⁶¹ in partnership with the United Nations Environment Program (UNEP), had organised the first *Global Environmental Forum from an Islamic Perspective* in Jeddah, Saudi Arabia (23rd–25th October 2000). Yet, this Saudi initiative had the ambition to sort out environmental policies from an eminently Islamic perspective. The attempt resulted in the formulation of the Islamic view on sustainable development (backed by some Islamic eco-scholars but

⁵⁶⁰ United Nations, World Summit on Sustainable Development (WSSD), *Johannesburg Declaration on Sustainable Development*, September 4, 2002, A/CONF.199/20, accessed May 18, 2015, <http://www.un-documents.net/jburgdec.htm>.

⁵⁶¹ Iran has also played an important international role in this respect. Between 1998 and 2006, the work of some leading Islamic scholars (e.g., Seyyed Hossein Nasr and Massoumeh Ebtekar) based on a mystical-philosophical approach, led to increased Iranian involvement in the Islamic ecological paradigm. For example, the proclamation of the UN *Year of Dialogue among Civilizations* (2001) under the auspices of the former Iranian President Mohammed Khatami, and the 2011 *Teheran Declaration on Environment Religion and Culture* were illustrative of the Iranian public commitment to ecological issues. For more on this, see Schwencke, *Globalized Eco-Islam*, 34–6.

criticised by others),⁵⁶² which was chiefly intended to convince both Muslims and non-Muslims of the universal validity and applicability of the main Islamic ethical principles, values, and normative prescriptions related to ecological matters. The same Forum adopted the *Jeddah Declaration on the Environment from an Islamic Perspective* (2001).⁵⁶³ In addition, the joint collaboration between the Organization of the Islamic Conference (OIC) and the Islamic Educational, Scientific and Cultural Organization (ISESCO)⁵⁶⁴ favoured the drafting of a working programme concerning the different Islamic perspectives on sustainable development, that was presented at the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg.⁵⁶⁵ Prior to that Summit, the First Islamic Conference of Environment Ministers (ICEM) had convened in Jeddah producing the OIC's *Islamic Declaration on Sustainable Development*, which was submitted at the Johannesburg Summit a few months later. The preparatory work that preceded the drafting of this Declaration was particularly relevant because it drew on the 1994 Islamic Principles for the Conservation of the Natural Environment (IPCNE).

⁵⁶² On the conflicting scholarly positions regarding the acceptability of the concept of *sustainable development* within an Islamic framework, see Laxman, Ansari, and Zawawi, "The Islamic Approach to Conserving Biodiversity," 752.

⁵⁶³ It is also worth remembering the *Tehran Declaration Concerning Religions, Cultures and Environment* (2001). See UN General Assembly, *Tehran Declaration on Environment, Religion and Culture*, Annex to the letter dated 9 October 2001 from the Permanent Representative of the Islamic Republic of Iran to the United Nations addressed to the Secretary-General, October 11, 2001, A/56/458, accessed May 23, 2015, <http://www.un.org/documents/ga/docs/56/a56458.pdf>.

⁵⁶⁴ ISESCO is a Morocco-based international organisation established in 1979 by OIC. The membership of the organisation, which has received financial support from Saudi Arabia, is composed of a majority of Arab countries, and includes fifty Muslim-majority countries such as Indonesia and Iran. ISESCO specialises in the fields of education, science, culture, and communication and aims to develop an educational system inspired by the Quran and the Sunnah.

⁵⁶⁵ ISESCO is affiliated with the International Islamic Fiqh Academy (IIFA). The Islamic juridical doctrine, whose evolution has played a part in the 'green revival' of contemporary Islamic thought, has in part influenced this organisation's activities. On this point, see Izzi Dien, *The Environmental Dimensions of Islam*, 81.

Pursuant to these initiatives, the Council of Arab Ministers Responsible for the Environment (CAMRE) issued several Declarations (2006, 2008, 2010) on regional environmental/sustainability policies.⁵⁶⁶ Rather than promoting an Islamic environmentalist discourse, however, these declarations were essentially aimed at improving regional cooperation and coordinating efforts in view of the UN Climate Change Conferences (Copenhagen 2009, Biodiversity 2009, Cancun 2010).⁵⁶⁷

Yet, what is more important to the present analysis is that the Johannesburg Summit (2002) led to international recognition of an Islamic approach to sustainability and sustainable development.⁵⁶⁸ In

⁵⁶⁶ For example, the Council of Arab Ministers Responsible for the Environment (CAMRE) issued the *Abu Dhabi Declaration* in 2001 (*Abu Dhabi Declaration: Perspective of Arab Environmental Action*). For more information on this, see Carlo Altomonte and Massimiliano Ferrara, eds., *The Economic and Political Aftermath of the Arab Spring: Perspectives from Middle East and North African Countries* (Cheltenham, UK: Edward Elgar, 2014), 170–2.

⁵⁶⁷ Anne Marieke Schwencke also mentioned the *Tunis Declaration on Enhancing the Efforts of the Islamic World towards Environment Protection and Sustainable Development*, which was adopted at the Fourth Islamic Conference of Ministers of Environment held under the high patronage of Mr. Zine El Abidin Ben Ali, former President of the Tunisian Republic, in the city of Hammamet, Tunisia, on 5th–6th October 2010. See Schwencke, *Globalized Eco-Islam*, 30.

⁵⁶⁸ As explained by Carol Chouchani Cherfane and Karim Makdisi, Arab regional initiatives and declarations in the field of sustainable development include the *Arab Declaration on Environment and Development* (1986); *Arab Declaration on Environment and Development and Future Prospects* (1991); *Regional Action Programme for Sustainable Development* (1992); *Abu Dhabi Declaration on Perspectives on Arab Environmental Action* (2001); *Oman Declaration on Environment and Sustainable Development* (2001); *Arab Declaration to the World Summit on Sustainable Development* (2002); *Joint AMCEN/CAMRE Ministerial Declaration on Sustainable Development by the African Ministerial Council on the Environment*; *Arab Initiative for Sustainable Development* (2002). See Carol Chouchani Cherfane and Karim Makdisi, “Envisioning an Arab Agenda for Trade and Environment,” in *Envisioning a Sustainable Development Agenda for Trade and Environment*, eds. Adil Najam, Mark Halle, and Ricardo Meléndez-Ortiz (New York: Palgrave Macmillan, 2007), 76, note 5. See also Schwencke, *Globalized Eco-Islam*, 28; UN Economic and Social Commission for Western Asia (ESCWA), *Governance for Sustainable Development in the Arab Region: Institutions and Instruments for Moving Beyond an Environmental Management Culture*, October 23, 2003, E/ESCWA/SDPD/2003/8, accessed May 7, 2015, <http://css.escwa.org.lb/sdpd/1684/GovEn.pdf>.

the same year, the Awqaf Foundation of South Africa hosted the *First Muslim Convention on Sustainable Development*, which prompted the emergence of a Muslim global civil society. The *Muslim Summit* (2002) was a parallel event to the WSSD and directly involved Muslim civil society organisations, whose representatives took part in the follow-up meetings, which stirred the publication of the *Draft Principles on Muslim Commitment to Sustainable Living and Development*.⁵⁶⁹

In the following years, *climate change* became one of the most debated global topics pursued at international fora, and the Islamic dimension of these debates was clearly present. The United Nations Climate Change Conferences held in Bali (2007), Istanbul (2009) and Bogor (2010) stimulated an ‘eco-Islamic surge’. In 2009, a committed group of Islamic eco-scholars and eco-theologian-activists were particularly active in the advocacy arena in concomitance with the Copenhagen Summit (COP-15). A few months later, a coalition of almost two-hundred representatives of Muslim-majority countries proclaimed *The Istanbul Declaration* (2009) and launched the *Muslim Seven Year Action Plan (M7YAP) 2010-2017 on Climate Change*, whose implementation was guided by an umbrella organisation, the Muslim Associations for Climate Change Action (MACCA). The attendees of the meeting, which included Islamic scholars and religious authorities (Yusuf al-Qaradawi and the Grand Muftis of Egypt and Palestine were among the prominent figures to sit in on the meeting),⁵⁷⁰ as well as environmental experts, representatives of Islamic civil

⁵⁶⁹ See Schwencke, *Globalized Eco-Islam*, 39; and Mohamed, “Revitalising an Eco-Justice Ethic of Islam,” 243.

⁵⁷⁰ Yusuf al-Qaradawi, President of the International Union of Muslim Scholars (IUMS) is one of the Muslim world’s most influential scholars and clerics. He published a book entitled *Environmental Protection in Islam (Ri’ayāt al-bī’ah fi Sharī’at al-Islām)* (Al-Qāhirah: Dār al-Shurūq, 2001). In 2009, the Grand Mufti of Egypt Dr. Ali Gomaa (<http://draligomaa.org/>) published another work (in Arabic) entitled *Environmentalism and Islamic Perspective* (Cairo: Al-Wabel Al-Sayyeb, 2009). For more on this, see Schwencke, *Globalized Eco-Islam*, 58–9.

society and Awqaf organisations, endorsed a set of proposals, such as a green Mecca and Hajj, eco-mosques, eco-halal food certification, and similar eco-friendly Islamic initiatives.⁵⁷¹

The *First International Muslim Conference on Climate Change* hosted in Bogor (West Java, Indonesia) in 2010 came after the Turkish initiative. The *Bogor Declaration* focused its attention on the role of all Muslim believers as agents of change in the face of the present eco-crisis. It also urged Muslims: (1) to establish “eco-Islamic” educational programmes and curricula both in schools and in religious educational institutions (in the *pesantren*, i.e. Islamic boarding schools based in Southeast Asia, for example); and (2) to design training programmes for religious leaders (imams) in collaboration with local mosques. More recently, as mentioned in the previous chapter, the International Islamic Climate Change Symposium, held in Istanbul, Turkey, on 17th–18th August 2015 adopted the *Islamic Declaration on Global Climate Change*. The final eight-page document, which was issued in view of the United Nations Sustainable Development Summit and the Paris Climate Summit (COP-21), is a collective statement about the new role that the Islamic world is willing to play in addressing global climate change.⁵⁷² The text of this Declaration addresses the entire Muslim

⁵⁷¹ See Schwencke, *Globalized Eco-Islam*, 42. *The Muslim 7-Year Action Plan (M7YAP) To Deal with Global Climate Change* was prepared by the Earth-Mates Dialogue Center (London, UK) in collaboration with the United Nations Development Program (UNDP) and the Alliance of Religions and Conservation (ARC). See Earth-Mates Dialogue Centre (EMDC), *The Muslim 7-Year Action Plan (M7YAP) To Deal with Global Climate Change*, November 2009, accessed June 7, 2015, <http://www.arcworld.org/downloads/Muslim-7YP.pdf>. For detailed information about the Muslim Association for Climate Change Action (MACCA), see Alliance of Religions and Conservation (ARC), “Long term plan,” accessed May 8, 2016, <http://www.arcworld.org/faiths.asp?pageID=165>.

⁵⁷² See Noor al-Hussein, “Islam, faith and climate change,” *Qantara.de*, September 28, 2015, accessed October 6, 2015, <https://en.qantara.de/content/eco-islam-noor-al-hussein-speaks-out-islam-faith-and-climate-change>; Kieran Cooke, “Muslim scholars say climate change poses dire threat,” *The Climate News Network*, July 15, 2015, accessed August 1, 2015, <http://climatenewsnetwork.net/muslim-scholars-say-climate-change-poses-dire-threat/>.

community and, it seems to me, partly recalls the ecological theories proposed by Pope Francis in his recent encyclical letter *Laudato Si'*. Interestingly, however, the *Islamic Declaration on Global Climate Change* combines Quranic verses and quotes from hadiths expressing the main principles and precepts of Islamic “eco-ethics” (stewardship, balance, God-consciousness, etc.) with general remarks either on international climate treaties (Kyoto Protocol), or on scientific reports concerning climate/environmental issues (e.g., UNEP documents, IPCC Reports). Further, the Declaration acknowledges the anthropic origin of climate change; consequently, and crucially for the reader, it lays the blame (1) on the wealthiest and most industrialised countries of the world (including the prosperous Gulf oil-based countries), which are regarded as the major polluters and resource consumers; (2) on multinational corporations, as well as on finance and business sector companies, which are thus asked to: (a) “shoulder the consequences of their profit-making activities”;⁵⁷³ (b) mitigate the environmental/climate impact of their own activities; (c) change unsustainable business models by moving toward a model of *circular economy* (based on the three Rs model: Reduce, Reuse, and Recycle); (d) make social and ecological responsibilities top priorities when extracting and utilising scarce resources; (e) divest from fossil-fuels and invest in alternative energy sources (renewable energy).

Parallel to these developments, much has happened on the interreligious-ecumenical front, especially since the 1990s. For example, as stated earlier, ARC has taken a leading international role in supporting the engagement of the world’s religions in ecological/sustainability issues. This global movement for ecological ecumenism, as Schwencke tells us, has attracted many Islamic eco-

⁵⁷³ See “Islamic Declaration on Global Climate Change,” n.p.

scholar-activists and Muslim opinion leaders and political actors (Tariq Ramadan, Seyyed Mohammad Khatami, Seyyed Hossein Nasr and Massoumeh Ebtekar).⁵⁷⁴ Among the most important interfaith initiatives are: the *Parliament of the World's Religions* (CPWR) and its 1995 *Declaration Toward a Global Ethic, The Earth Charter* (2000), and the 2001 *Tehran Declaration on Environment, Religion and Culture*, which was adopted on the occasion of the UN-sponsored International Conference on Environment, Peace, and the Dialogue among Civilizations and Cultures – Tehran Conference.⁵⁷⁵

2.5. Muslim global eco-activism and “green” lifestyles⁵⁷⁶

A good example of the ‘green reawakening’ of the Muslim global civil society is the UK-based *Islamic Foundation for Ecology and Environmental Sciences* (IFEES).⁵⁷⁷ Established as a charity in 1994 by

⁵⁷⁴ See Schwencke, *Globalized Eco-Islam*, 33 ff.

⁵⁷⁵ UN General Assembly, *Tehran Declaration on Environment, Religion and Culture*, cit.

⁵⁷⁶ For an extensive analysis of Islamic “green” lifestyles and “green” spirituality, see Ibrahim Abdul-Matin’s book *Green Deen: What Islam Teaches About Protecting the Planet*, cit. The North American Muslim Abdul-Matin wrote this book in 2010, when he was working as environmental policy advisor for the former Mayor of New York City Michael Bloomberg. The main title of the book, *Green Deen* (which can be translated as “green religion”), envisions a new path for the entire Muslim community, i.e., a path toward sustainability that would take into account the rich and diverse Islamic ecological traditions. The book — which is divided into four parts, each dealing with a specific ecological problem (i.e., waste; watt; water; food) — includes innovative proposals and personal stories about sustainable lifestyles and provides a detailed analysis of Quranic verses and prophetic teachings related to contemporary environmental issues. My radio podcast (in Italian) commenting on this book is available at http://www.spreaker.com/user/radiobullets/green-islam-quando-lislam-e-eco_8. For more information on the author, see Kimberly Austin, “Green Deen Interview with Ibrahim Abdul-Matin,” *Islam & Science TV*, October 21, 2013, accessed March 15, 2015, <https://www.youtube.com/watch?v=I1crKwQosO4>. See also the Green Deen South Africa (website), accessed May 8, 2015, <http://greendeensa.org/>. On the Muslim ‘green blogosphere’, see, e.g., Schwencke, *Globalized Eco-Islam*, 51.

⁵⁷⁷ See Islamic Foundation for Ecology and Environmental Sciences (IFEES) (official website), accessed January 6, 2015, <http://www.ifees.org.uk/>. Wisdom in Nature (WIN) (<http://wisdominnature.org/>) is another important UK-based environmental organisation specialising in Islamic eco-ethics and ecological thought.

Fazlun Khalid, IFEES is one of the oldest ‘eco-Islamic’ organisations still active in Europe, with branch offices in countries like Indonesia, Southern-Eastern Africa, Canada, and the USA. IFEES is a leading international NGO in the field of Islamic resource management systems applied to large-scale nature conservation projects. In 1999, it launched the so-called Misali Island Islamic Environmental Ethics Project. This community-based educational programme was aimed at promoting sustainable coastal fishery practices in the small forest-covered Misali Island, located in the Zanzibar archipelago (Tanzania). IFEES successfully managed to stop the illegal activities being carried out by the 1,600 predominantly Muslim local fishermen. The latter were threatening their precious coral reefs by means of dynamite fishing. After having participated in a series of workshops led by local sheykhs, religious authorities and Qur’an schoolteachers, the Misali fishing community decided to abandon these destructive techniques.⁵⁷⁸ This Zanzibar project (which was then replicated in Indonesia) relied on a set of training materials, including a booklet titled *Qur’an, Creation and Conservation* (1999) and the *First Islamic Conservation Guide* (2007), a pioneering teaching manual containing ‘eco-Islamic’ conservation guidelines. This elucidatory example shows that an “eco-Islamic” view based on a sound eco-theology can actually give ethical orientation and practical responses to the sustainability problems of contemporary Muslim-majority societies.

Of course, the available Islamic eco-guides and fatwas⁵⁷⁹ on ecological issues are not solely focused on ecosystem conservation and

⁵⁷⁸ Daniel Dickinson, “Eco-Islam hits Zanzibar fishermen: BBC STORY,” *BBC News*, February 17, 2005, accessed March 7, 2015, <http://www.arcworld.org/news.asp?pageID=70>. On the Misali Ethics Project, see Jenkins, “Sustainability,” 108–10.

⁵⁷⁹ Fatwas (in Arabic *fatāwà*, plural form of *fatwà*), which means “Islamic legal pronouncement”.

protection.⁵⁸⁰ Nowadays, climate change is becoming a ‘hot topic’ for “eco-Muslims” (i.e., ecologically aware Muslims).⁵⁸¹ Very recently, for example, the British charity organisation Climate Outreach and Information Network (COIN) produced in partnership with GreenFaith⁵⁸² a practical guide for climate communicators titled *Faith and Climate Change: A guide to talking with the five major faiths* (2016).⁵⁸³ Islam is included among the major world faiths (the others being Buddhism, Christianity, Hinduism, and Judaism) whose climate change-related language seems to be religiously-anchored and, above all, action-oriented. The guide singled out three main Islamic narratives about climate change, with the telling titles: (1) “Earth care – a precious gift”; (2) “Climate change is disrupting the balance”; and (3) “We live our faith through our actions”.⁵⁸⁴

A similar action-oriented guide book is the *Muslim Green Guide to Reducing Climate Change*, a 2008 joint publication of UK LifeMakers and the Islamic Foundation for Ecology and Environmental

⁵⁸⁰ For more information on recent Islamic initiatives for the conservation of wildlife, see Alliance for Religions and Conservation (ARC), “Islamic eco-news 2014,” accessed May 5, 2016, <http://www.arcworld.org/faiths.asp?pageID=112>. For an overview on the Indonesian fatwas concerning ecological issues (e.g., protection of engendered species; environmentally-friendly mining), see ARC, “Indonesian clerics issue fatwa to protect endangered species,” accessed May 6, 2016, <http://www.arcworld.org/news.asp?pageID=689>; and R.H. Priyambodo, “MUI fatwa on environment normative reference,” *Antara News*, July 27, 2011, accessed February 8, 2015, <http://www.antaraneews.com/en/news/74166/mui-fatwa-on-environment-normative-reference>.

⁵⁸¹ For more on this, see, for example, Shelina Janmohamed, *Generation M: Young Muslims Changing the World* (London: I.B. Tauris, 2016), 286–7.

⁵⁸² GreenFaith is a US-based interfaith environmental organisation. See GreenFaith (website), accessed January 9, 2015, <http://www.greenfaith.org/>.

⁵⁸³ See George Marshall et al., “Faith & Climate Change – A guide to talking with the five major faiths,” (Oxford: Climate Outreach, 2016), accessed March 6, 2016, <http://climateoutreach.org/resources/climate-change-faith/>.

⁵⁸⁴ See Marshall et al., “Faith & Climate Change,” 24–5. Another interesting online article about Islam and climate change is John Wihbey, “‘Green Muslims’, Eco-Islam and Evolving Climate Change Consciousness,” *Yale Climate Connections*, April 11, 2012, accessed May 22, 2015, <http://www.yaleclimateconnections.org/2012/04/green-muslims-eco-islam-and-evolving-climate-change-consciousness/>.

Sciences (IFEES), in collaboration with the charity Muslim Hands.⁵⁸⁵ This handbook contains general information about climate change and practical suggestions to alleviate climate-related problems. Additionally, it refers to some Islamic ecological teachings that may be helpful in engaging Muslims with the global climate movement. Another interesting guide is the *Green Guide for Hajj*,⁵⁸⁶ i.e., a collection of eco-theological principles and practical guidelines for an eco-friendly and waste-reducing annual Islamic pilgrimage to Mecca (in Arabic *Hajj*, “pilgrimage”).⁵⁸⁷ Both the *Green Guide for Hajj* and the booklet entitled *Islam and Water: The Hajjar (r.a.) Story and Guide*⁵⁸⁸ were launched by Global One 2015 and EcoMuslim at Assisi (Italy) in November 2011. These two publications were issued within the framework of activities promoted by the Alliance of Religions and Conservation (ARC) on the occasion of the Sacred Land Launch and Celebration of the Green Pilgrimage Network. The special guide to holy hajj contains practical tips and pieces of advice (e.g., taking the Makkah Metro and using refillable water bottles) for Muslim pilgrims travelling

⁵⁸⁵ Islamic Foundation for Ecology and Environmental Sciences (IFEES), *Muslim Green Guide to Reducing Climate Change*, co-published with UK LifeMakers and Muslim Hands, 2008, accessed May 26, 2015, <http://www.ifees.org.uk/wp-content/uploads/2015/04/1375186536.pdf>. See also a video-interview with the Egyptian preacher Amr Khaled: Islamic Foundation for Ecology and Environmental Sciences (IFEES), “Muslim Green Guide – Interview with Amr Khaled,” co-sponsored by LifeMakers, September 2008, accessed May 27, 2015, <http://www.ifees.org.uk/green-guide-for-muslims/>.

⁵⁸⁶ Alliance of Religions and Conservation (ARC), “The Green Guide for Hajj,” (Bath, UK: ARC, 2011), accessed February 6, 2015, http://www.arcworld.org/downloads/Green_Guide_for_Hajj.pdf.

⁵⁸⁷ The annual Islamic pilgrimage to Mecca, which is one of the five Islamic pillars, is the largest yearly pilgrimage worldwide.

⁵⁸⁸ See Husna Ahmad Obe, *Islam and Water: The Hajjar (r.a.) Story and Guide* (London: Global One, 2015), accessed May 18, 2016, <http://www.globalone2015.org/wp-content/uploads/2015/03/Hajjar-Story.pdf>. See also its video version in English (cartoon). Ahmad, Husna, ed., “Islam and Water: The Hajjar (r.a.) Story and Guide,” produced and directed by M. Islam (Media and Communications, Global One, 2015), accessed May 8, 2016, <https://www.youtube.com/watch?v=S2tDhldp2fw>.

every year to the Holy city of Mecca, in Saudi Arabia. The ‘eco-transformation’ of the Hajj experience is, indeed, a good occasion for Muslims to reduce their own ecological footprint, not only during the journey to Mecca but also during the pilgrimage rituals performed at the sacred sites.

In a similar vein, Islamic religious preachers throughout the Muslim world have been increasingly concerned with the promotion of an Islamic approach to environmental ethics and religious environmentalism. In the past years, some of them have adhered to a far-reaching global initiative called the *Green Khutbah campaign*.⁵⁸⁹ Imams and khateeb⁵⁹⁰ are asked to devote their *khutbah* (“sermon”) to ecological topics that are specifically relevant to Muslims and that may encourage them to take care of the Earth and its precious resources.⁵⁹¹ For instance, Muslim eco-communities worldwide celebrated the 45th anniversary of Earth Day (22 April 2015) through a Green Khutba on water conservation (*Water – A Sacred Gift*). Giving green Friday Khutbas is considered a good way to “green the Muslim’s *deen*”⁵⁹² — that is, to make Islam an eco-religion. For this reason, committed (yet relatively small) groups of Muslim eco-believers go to *eco-mosques*.

⁵⁸⁹ On the *Green Khutbah Campaign*, see Khaleafa.com, “Green Khutba: Awakening Our Stewardship Responsibility Through Action,” accessed May 19, 2016, <http://www.khaleafa.com/green-khutbah-campaign/>.

⁵⁹⁰ The Arabic word *khaṭīb* (“sermon-giver”) refers to the Islamic preacher who is in charge of giving the sermon during the Friday congregational prayer and on the two annual festive days (*īds*).

⁵⁹¹ As stated on the official website of Khaleafa.com, “The focus of the campaign is threefold: 1) To raise awareness about the current state of the environment today; 2) To highlight the contributions Islam can bring towards the environmental movement; 3) To provide proactive tools that the Muslim community can adopt into their daily lives”. See Khaleafa.com, “Green Khutba,” cit.

⁵⁹² “The Arabic word used for religion in the Qur’an and in other Islamic texts is *dīn* (from the trilateral root D-Y-N), which is a comprehensive term with multiple layers of meaning, including ‘to obey,’ ‘to be subservient to God,’ ‘a way of life,’ ‘Divine Law,’ ‘a pattern,’ and ‘Recompense’”. Muḥaffar Iqbāl, *Science and Islam* (London: Greenwood Press, 2007), 62.

In 2012, the Agency for Development Education (MADE in Europe)⁵⁹³ launched the *Green Up! Award Scheme* to encourage mosques and Muslim communities living in UK to become more environmentally-responsible.⁵⁹⁴ The above-mentioned scheme comprises a toolkit,⁵⁹⁵ i.e. a detailed guide that provides scientific information and more general data about climate change and its policy implications, as well as Quranic references and some concrete ideas for promoting environmentally sustainable practices within mosques and local Muslim communities (e.g., reduce-reuse-recycle initiatives; energy-saving and food-saving programmes; community mosque gardens). Further, the toolkit spells out the relevance of eco-mosques in the UK and elsewhere around the world (Turkey, USA, Burkina Faso, Germany, Singapore). The new eco-mosques are essentially described as environmentally, socially, and economically sustainable places of worship that are built according to ecological standards and technology (water heating, solar panels, wind-power turbines, use of natural light,

⁵⁹³ Another influential UK-based eco-Islamic group is Muslim Climate Action, which has increasingly mobilised British Muslim communities around climate change. See Muslim Climate Action (official website), accessed June 20, 2015, <http://www.muslimclimateaction.org.uk/>. See also Islamic Relief Worldwide (IRW), “UK rallies to call for climate action,” accessed September 20, 2015, <http://www.islamic-relief.org/uk-rallies-to-call-for-climate-action/>; and idem, *Climate Change Policy* (Birmingham, UK: Islamic Relief Worldwide, December 2014), accessed May 27, 2015, http://www.muslimclimateaction.org.uk/wp-content/uploads/2015/05/POLICY_CLIMATE_WEB_V1.pdf. It is also worth mentioning *The Islamic Climate Change Declaration Toolkit* (2015). Islamic Relief Worldwide (IRW) published this toolkit in concomitance with the 2015 *Islamic Climate Change Declaration*, which was launched on 18th August 2015 in Istanbul (Turkey). See Lotifa Begum, *The Islamic Climate Change Declaration Toolkit* (Birmingham, UK: Islamic Relief Worldwide, 2015), accessed December 6, 2015, http://policy.islamic-relief.com/wp-content/uploads/2015/11/climate_toolkit_v5.pdf.

⁵⁹⁴ On the *Green Up! Award* launched by the London-based NGO MADE in Europe, see Muslim Action for Development & Environment (MADE), “Green Up! Award,” accessed May 6, 2016, <https://www.made.ngo/get-involved/eco-ambassador-2>.

⁵⁹⁵ See Muslim Action for Development & Environment (MADE), *The Green Up! Toolkit – A Guide and Award Scheme for Mosques and Islamic Groups* (London, UK: MADE in Europe, 2013), accessed May 7, 2016, <http://www.arcworld.org/downloads/Green-Up-My-Community-Toolkit.pdf>.

rooftop gardens, etc.).⁵⁹⁶ Indeed, eco-mosques are bio-constructions. That is, they are places of worship designed and built in line with the Islamic bio-architectural model, which on the one hand envisions simple, functional building styles in accordance with the Islamic principle of moderation, but on the other hand adopts innovative technologies. Thus, these buildings are designed and constructed according to bio-architectural principles, that is, in a manner that: (a) reduces their own ecological footprint; and (b) preserves the long-term well-being of the natural environment, as well as of the Muslim communities attending their local mosques on a regular basis for prayers and other religious duties.⁵⁹⁷ As contemporary eco-mosques are generally designed for and built in urban spaces, cities can be considered as central places in this respect.

In 2007, a group of young British Muslims living in the city of Birmingham, decided to clean up their neighbourhood. They launched the *Clean Medina Campaign*, an *eco-jihad* (“ecological struggle”)⁵⁹⁸ against rubbish and waste. That eco-initiative was actually sponsored

⁵⁹⁶ See, for example, Alliance of Religions and Conservation (ARC), “Islamic eco-news 2014,” accessed May 5, 2016, <http://www.arcworld.org/faiths.asp?pageID=112>.

⁵⁹⁷ On eco-mosques, see, for example, a recent online article published on *The Guardian* by Bilal Badat, “Eco-mosque is another powerful symbol of Islamic ingenuity,” *The Guardian*, June 24, 2011, accessed July 7, 2015, <http://www.theguardian.com/commentisfree/belief/2011/jun/24/eco-mosque-wind-turbine>; see also The Eco Muslim, “10 Things Every Green Mosque Should Have: Green Mosque Guide,” 2013, accessed May 19, 2015, <http://www.thecomuslim.com/2013/08/10-things-every-green-mosque-should-have.html>.

⁵⁹⁸ *Ecological jihad* (also known in its shortened form “eco-jihad”) is a neologism that derives from the Arabic word *jihād*, which means “effort”, “exertion” “struggle (in the path of God)”. It refers to the ecological efforts made by contemporary Muslims to raise ecological awareness and spur committed environmental action. On the different meanings of jihad, see John L. Esposito, *What Everyone Needs to Know about Islam* (New York: Oxford University Press, 2002), 133 ff. For example, the Senegalese imam Youssoupha Sarr performed an eco-jihad against pollution and illegal urban waste in Guédiawaye, in the Dakar region. See Nicolas Haque, “Senegal imam calls for ‘green jihad’,” *Al-Jazeera English* [blog], August 5, 2015, accessed August 7, 2015, <http://www.aljazeera.com/blogs/africa/2015/08/senegal-imam-calls-green-jihad-150805051318929.html>.

by Fazlun Khalid of IFEES (Islamic Foundation for Ecology and Environmental Sciences). Surprisingly, a Muslim eco-campaign aimed at cleaning up a district and its main mosques also became an opportunity to transform the whole *madīnah* (the Arabic word for “city”) into a greener one. Muslim boys and girls, rappers, bloggers,⁵⁹⁹ and young filmmakers, together with children and ordinary residents, took part in an extraordinary eco-initiative, which included a short video produced with the support of the Birmingham City Council.⁶⁰⁰

In addition to waste collection (bottom-up) activities, there is another trend that is getting the attention of young generations of Muslims worldwide: vegetarianism and veganism. Becoming vegetarian or vegan are both on the rise, especially among young Muslims living in Western countries.⁶⁰¹ At first glance, such dietary regimes may appear at odds with the Islamic tradition (the consumption of *ḥalāl* — i.e. “permissible”/“allowed” — meat is a good case in point). While it is true that Muslims make extensive use of meat, eggs, cheese etc. not only for dietary reasons but also for specific religious-ritualistic reasons (slaughtering rituals/animal sacrifice during the Islamic celebration of *īd al-aḍḥá*, the “Sacrifice Feast”, for example),⁶⁰² it is worth remembering that the Islamic tradition (as prescribed in Qur’anic verses and prophetic teachings) in fact contains customary norms and religious precepts about animal welfare and, above all, about the Islamic duty to fight against cruelty and abuse toward non-human animals. Thus, it should come as no surprise that

⁵⁹⁹ See *Clean Medina* (blog), accessed May 7, 2016, <http://cleanmedina.blogspot.it/>.

⁶⁰⁰ See Islamic Foundation for Ecology and Environmental Sciences (IFEES), “Clean Medina,” *YouTube*, June 12, 2013, accessed June 6, 2015, <https://www.youtube.com/watch?v=VZdNqJ9WGFg>.

⁶⁰¹ See, e.g., Mayada Srouji, “Why I believe today’s Muslims should support veganism,” *Muslim*, November 1, 2015, accessed December 7, 2015, <http://mvslim.com/why-i-believe-todays-muslims-should-support-veganism/>.

⁶⁰² An exception to this is, for example, the prohibition of pork consumption as part of the Islamic dietary laws derived from the traditional Islamic jurisprudence.

these moral instructions have been easily adopted by contemporary Muslims either to participate in present-day global campaigns against animal cruelty and suffering (e.g., against excessive meat and dairy consumption and production), or to simply sympathise with the positions of non-Muslim (secular) vegetarians and vegans. Their ultimate goal is, respectively, to support Islamic-compliant sustainable farming techniques and to establish an innovative vegan/vegetarian regime that can rekindle — and, indeed, that does not contrast with — the Islamic tradition. *Food for Faith* is the title of a short video produced in 2007 by the documentary filmmakers Marty Ostrow and Terry Kay Rockefeller as part of a broader interfaith documentary project called *The Renewal Project* (<http://www.renewalproject.net/>). In Illinois, a Chicago-based Muslim community tried to conciliate Islamic wisdom and rituals (for example, they referred to the Qur’anic notion of *taqwà*, which means “reverence to God”, “piety/moral righteousness”, and “God-consciousness”) with eco-farming practices. In the end, they produced *eco-halāl* organic meat; during the holy month of Ramadan they also charitably donated that healthy and eco-friendly meat to the poorest of their community.⁶⁰³

Green Ramadan (or *Rawmadan*)⁶⁰⁴ is, indeed, another example of the doctrinal accommodation of Islamic traditional customs and

⁶⁰³ The Renewal Project, “Food for Faith,” accessed May 7, 2016, http://www.renewalproject.net/film/story/food_for_faith. For additional information on the Genetically Modified Organism (GMO) food debate within Muslim theological circles, see, for example, the following article published on *EdenKeeper*: Robyn Purchia, “Islamic Beliefs About GMOs,” *EdenKeeper*, June 18, 2015, accessed July 1, 2015, <http://edenkeeper.org/2015/06/18/islamic-beliefs-about-gmos/>. See also Husna Ahmad Obe, *Islamic Farming: A Toolkit for Conservation Agriculture* (UK: ARC and Global One, 2015), accessed March 7, 2016, http://www.muslimclimateaction.org.uk/wp-content/uploads/2015/05/Islamic_Farming.pdf.

⁶⁰⁴ *Rawmadan* (blog), accessed July 6, 2015, <https://rawmadan.wordpress.com/>. *Rawmadan* is a neologism combining two words: *raw* (“organic”) and *Ramadan* (which refers to the ninth month of the Islamic calendar).

practices to the current ecological challenges. As you might know, Ramadan is the month of fasting for Muslims. Hence, “green Ramadan” is the expression used to refer either to a vegetarian or to a vegan-style Ramadan. In October 2007, the Washington-based members of the DC Green Muslims group (<http://www.greenmuslims.org/>)⁶⁰⁵ arranged an organic vegetarian potluck dinner that was meant to become a *green iftar*. Iftar (*iftār*) is the evening meal that marks the end of the daylong fast during the month of Ramadan, whereas the *green iftar diet* consists of a vegetarian/vegan menu.⁶⁰⁶ Today, there are plenty of similar eco-initiatives (as well as specialised blogs, websites and social media platforms),⁶⁰⁷ either trying to modify Islamic eating habits and to promote “sustainable diets”, such as Muslim-friendly vegetarian and vegan diets, or seeking to spread, for example, Muslim vegan feminism.⁶⁰⁸

⁶⁰⁵ For further information on the history of the Green Muslims group in Washington D.C. (US), see Audrey Queen, *Greening Islam: How the Green Muslims are combating climate change*, illus. Lucy Bellwood, *The Nib – Medium*, June 30, 2014, accessed July 2, 2015, <https://medium.com/the-nib/greening-islam-53f697bdb819#jde4aofkm>. See also a recent video-interview with Sarah Jawaid, Director of the group *DC Green Muslims*. Faith In Action DC, “Sarah Jawaid of Green Muslims,” *YouTube*, April, 22, 2012, accessed February 6, 2015, <https://www.youtube.com/watch?v=YyFYNNxWUPU>.

⁶⁰⁶ See Green Muslims in the District, “Green Muslim Dinner-Iftar I: October 5, 2007; Arlington, VA,” *DC Green Muslims* (blog), November 13, 2007, accessed February 6, 2015, <http://dgreenmuslims.blogspot.it/2007/11/green-iftar-october-5-2007.html>.

⁶⁰⁷ See, for example, Vegetarian Muslim Society’s Facebook page, accessed February 9, 2016, https://www.facebook.com/Vegetarian-Muslim-Society-174872052572033/info/?tab=page_info; Muslim Vegan Community’s Facebook page, accessed February 9, 2016, <https://www.facebook.com/groups/muslimnraw/?fref=ts>. See also Green Ramadan (blog), accessed March 6, 2015, <http://greenramadan.com/>; One Arab Vegan (blog), accessed March 6, 2015, <http://www.onearabvegan.com/>

⁶⁰⁸ On Muslim vegan feminism, see Ruby Hamad, “Halal: Perspectives on Intersecting Oppressions from a Muslim Vegan Feminist,” *Earthling Liberation Kollektive – ELK*, April, 3, 2015, accessed June 6, 2016, <http://humanrightsareanimalrights.com/2015/04/03/ruby-hamad-halal-perspectives-on-intersecting-oppressions-from-a-muslim-vegan-feminist/>.

Moreover, some Muslim believers, especially Muslim women, are sensitive to ecological fashion styles and businesses.⁶⁰⁹ These ecologically-engaged women want to adapt their own Islamic-based dress habits to the newest trends in eco-fashion. *Eco-hijab* is in fact a neologism coined by contemporary eco-Muslim women to indicate an *eco-halāl* Islamic veil, i.e. an organic hijab made from organic textiles such as bamboo.⁶¹⁰

In this continuously changing context, sustainable transportation appears to be, however, a crucial sector that has recently captivated young eco-Muslims, and especially those living in Europe. For example, the London Muslim Centre and MADE in Europe jointly organised the second edition of the Tour De Salah cycle challenge in 2015. This one-hundred-kilometre-long critical-mass bike ride around London represented both a spiritual and physical challenge for the British Muslims who adhered to the initiative. The bike tour included five prayer stops at five different mosques in London.

To conclude, it seems to me that Islamic eco-campaigns and eco-educational initiatives and projects have stimulated Muslim environmental activism not only in Western countries (Europe, US), but

⁶⁰⁹ See, for example, the following website specialising in eco-fashion (<http://eco-chick.com/>), which published an interview with the North American Muslim interfaith eco-activist Amanda Quraishi. See Sophie Hessekiel, "Interfaith Activist Amanda Quraishi on Islam and the Eco," *Eco-Chick*, August 20, 2015, accessed September 2, 2015, <http://eco-chick.com/2015/08/33529/interfaith-activist-amanda-quaraishi-on-islam-and-the-eco/>.

⁶¹⁰ For a detailed account of contemporary eco-hijab fashion styles and businesses, see, for example, Zaufishan (The eco-Muslim), "Eco-Hijabs on the rise among Muslim fashionistas, interview with Mariam Sobh," *Green Prophet*, January 24, 2011, accessed February 4, 2015, <http://www.greenprophet.com/2011/01/eco-hijabs-on-rise>. A noteworthy commercial website dedicated to eco-hijabs is Hijabtrendz (website), accessed May 7, 2016, <http://www.hijabtrendz.com/>. Overall, hijab fashion is capturing international attention. Dolce & Gabbana have recently launched a collection of luxury Islamic hijabs and abayas. For more on this, see Aisha Gani, "Dolce & Gabbana launches luxury hijab collection," *The Guardian*, January 7, 2016, accessed February 8, 2016, <http://www.theguardian.com/world/2016/jan/07/dolce-gabbana-debuts-luxury-hijab-collection>.

also in Muslim-majority countries, where such eco-initiatives are increasing in number and impact, making their presence felt on a global scale thanks to the connective power of the internet and social media. Undeniably, these emerging “eco-Islamic” lifestyles (e.g., “eco-fashion”) often attract the most affluent elites of the Muslim world. Still, the so-called “eco-Islamic worldview” has the potentiality to penetrate socio-economic and physical boundaries and to overcome any kind of barrier, be it cultural, religious or ideological. Sustainability thus becomes a cross-cultural, inclusive project that involves all Muslims worldwide.

Concluding remarks

This chapter allowed us to dig deeper into the role of religious culture (namely, Islamic culture) in inspiring and motivating religious adherents to embark on new paths toward ecological sensitivity and care. The detailed analysis of the foundational basis of Islamic eco-ethics (as interpreted by the main representatives of what I have referred to as ‘eco-Islam’) highlighted the moral-spiritual and practical challenges to be taken up by Islamic faith-/interfaith-based ecological institutions, organisations and movements, as well as by Muslim individuals and communities based in either Muslim-majority countries or elsewhere in the world.⁶¹¹ In this chapter, it was also tacitly stated that a *collective green shift* of Muslim societies entails a parallel *individual shift* in Muslims’ perception of reality, which is partly filtered through a set of inherited values and ethical belief systems. More in general, it was shown that these perceptual and cognitive transformations may help people realise that working together through cooperation and solidarity is the best way to forge a renewed set of eco-ethics, which thus becomes an integral part of ecological activism and sustainability-oriented efforts.

Undoubtedly, all these recent theoretical developments in the field of Islamic environmental and climate ethics, law, and governance are tangible instances of the growing influence of Islamic theology and Islamic institutions on contemporary ecological and climate debates. Yet, the Islamic ecological message (including its holistic approach to nature) has been weakened by the fact that it might be used as an ideological tool for political purposes (e.g., consensus building through

⁶¹¹ Overall, these eco-religious movements claim to: (1) raise all believers’ ecological consciousness by recovering the spiritual resources offered by their own and other world religions; (2) resist the short-termist, profit-oriented and consumerist attitudes that are spread across our economically globalised world; (3) take direct action for the Earth.

the ‘Islamisation’ of the public sphere), rather than as a real instrument of socio-ecological change in Muslim contexts. In addition, this message has been systematically obfuscated by those Muslim/non-Muslim scholars, intellectuals, and members of civil society who believe that Islam can be neither a source of ecological knowledge, nor a religion intrinsically capable of providing solutions to present-day sustainability problems. In many circumstances, indeed, Islamic eco-ethical theories and legal prescriptions run the risk of being just ink on paper insofar as they do not represent the views and practices of the majority of Muslims living in the world today. Thus, they might appear to be unprogressive ecological theories whose theological and practical implications: (a) pay insufficient heed to either the evolution of Muslim-majority societies, or to the historical transformation of their ethical-legal traditions into secular legal codes; (b) mostly reflect the Sunni perspective on this topic; (c) are expressed in a language that speaks only to the hearts and minds of a small group of Muslims, thus marginalising, for example, non-Muslim movements of ecological resistance.

Along these lines, however, it was contended in this chapter that two different accommodating processes can be detected when looking at contemporary Muslim global eco-activism. In some cases, an already existent Islamic tradition (e.g., the Islamic hijab, iftar, Ramadan, khutba, hajj, halal food) has been adapted and expanded to suit the individual as well as collective social, economic, and ecological needs of the present-day Muslim world. In other cases, the global spread of scientific facts on climate change and the diffusion of seemingly *non-religious* ecological trends (such as vegetarianism/veganism and Critical Mass bicycle rides) have actually encouraged the representatives, spokespersons and members of this global ‘eco-Islamic community’ to rediscover and re-deploy their own traditional moral-

ethical resources. Nevertheless, as stated earlier in this chapter, present-day Muslim eco-activism has been stimulated by small-scale, elite-oriented and Western-based social movements that, for example, have found little if no supporters in the Arab-Muslim world. In my view, the limited scope of Muslim eco-activism does not adequately consider the importance of addressing global-scale sustainability problems through *cross-cultural* experiments of ecological knowledge and creativity, which, it seems to me, go well beyond religious ethical-moral obligation.

Section II: Religion, ecology, and the economy of the commons

Introduction

Section II is mainly intended to emphasise the conceptual and empirical relationship between religion, ecology, and what has been called the “economy of the commons”, i.e., the bottom-up and cooperative micro-economy of traditional-customary natural resources management systems.⁶¹² In Deane-Drummond and Bedford-Strohm’s words, it is crucial to analyse “how economic thinking is shaping current understanding of both the value of the natural world and ecological change and how economic thinking is influencing our perception of different ecological problems and their possible solutions”.⁶¹³ Moreover, it is equally important to stress that, although there has been a relatively recent surge of religious interest in both ecological and economic/financial sustainability problems, Islam and other major world religions have always had something to say about how to value nature and manage natural resources, as well as about how to (re-)shape their own adherents’ socio-economic worldviews and practices. Thus, one of the main objectives of Section II, due to the historical synergy between religious-spiritual, ecological, and economic dimensions, is to engage the reader in an inter- (and trans-) disciplinary attempt to reconstruct the lost connections between economy and ecology, and between economy, ecology and religion (notably, Islam), as presented in Chapters 3 and 4, respectively.

First, as clearly stated by Joachim H. Spangenberg, it is plausible to affirm that addressing current global ecological challenges like

⁶¹² These ancient forms of local resource management can be considered as the ‘prototypes’ of the current forms of sharing (or peer) economy. For more details on this topic, see Paula Gori, Pier Luigi Parcu and Maria Luisa Stasi, “Smart Cities and Sharing Economy,” *EUI Working Paper RSCAS 96* (December 2015): 2, accessed October 6, 2016, <http://dx.doi.org/10.2139/ssrn.2706603>.

⁶¹³ Deane-Drummond and Bedford-Strohm, “Introduction,” 9.

biodiversity protection⁶¹⁴ “requires both scientific knowledge and change in politics, business and consumption practice”.⁶¹⁵ In current times, mainstream economists, international political and economic stakeholders (e.g., the European Commission, OECD), together with ordinary citizens/consumers, are not only running an expanding capitalistic economy but also the *oikos* of the Earth — i.e., the household of the non-human world. Therefore, following Laura M. Hartman’s line of thought, the *oikos* ought to be seriously considered when making political/policy, economic, and financial decisions affecting the global ecological system.⁶¹⁶ In short, it can be argued with some degree of cogency that global political, economic and financial systems ought to recognise and protect the *ecological, cultural, and personal value of natural systems*.⁶¹⁷

Second, it is worth noting that since the 1970s (and even before) a group of economists (Herman Daly, Amartya Sen, Meadows et al.) has started to argue that the globalised capitalist economy of our times (and, in particular, market capitalism) has not only bypassed the catastrophic effects of global ecological degradation, but has also been complicit in the reproduction of socio-economic injustices in many parts of the globe.⁶¹⁸ As a result, the polarisation between different schools of economic thought has become more and more apparent in the last few decades. On the one hand, (*neoclassical*) *environmental*

⁶¹⁴ For example, conservation of wetlands, rainforests, and deserts; protection of iconic species; preservation of agro-biodiversity and food security.

⁶¹⁵ Joachim H. Spangenberg, “Ideology and practice of the ‘Green Economy’: World views shaping science and politics,” in *The Politics of Sustainability: Philosophical Perspectives*, eds. Dieter Birnbacher and May Thorseth (Abingdon, Oxon; New York, NY: Routledge Studies in Sustainability, 2015), 128.

⁶¹⁶ Laura M. Hartman, “Economics,” in *Grounding Religion: A Field Guide to the Study of Religion and Ecology*, eds. Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O’Brien (New York: Routledge, 2011), 147–8.

⁶¹⁷ *Ibid.*

⁶¹⁸ On this point, see Johnston, *Religion and Sustainability*, 97–8.

and resource economics views nature and its components as discrete and independent economic goods, i.e., as single “privatisable” commodities to be priced and traded on the market. On the other hand, *ecological economics*⁶¹⁹ considers the visions, ontologies and methodological attitudes of most neoclassical (environmental) economists as misleading and, above all, as socio-ecologically destructive. Ecological economists fundamentally reject both the idea and practice of viewing nature and its basic services as commodities; consequently, they believe that it is not possible to attach instrumental (use) value (that is, a monetary value or price) to ecosystems and natural ecosystem services. Rather, these economists believe that such unique goods are neither marketable resources, nor production factors to be exploited without limits. In other words, they maintain that “nature” ought not to comply with market rules and economic goals such as profit generation and maximisation. Thus, in this view, natural resources are said to have an inherent, non-instrumental, and non-economic value. As further explained by Spangenberg, ecological economists hold that it is the economy that “nests within the global ecosystem and is utterly dependent on it”.⁶²⁰ This is the theoretical background against which I will explore the drawbacks of the so-called “weak” sustainability thesis,⁶²¹ which in part reflects the neoclassical environmental economic view (see Chapter 3, par. 3.1).

⁶¹⁹ See Robert Costanza, “What is Ecological Economics?” *Ecological Economics* 1 (1989): 1–7, accessed May 9, 2015, <http://www.uvm.edu/~jfarley/EEseminar/readings/What%20is%20ecological%20economics.pdf>.

⁶²⁰ Prugh, Costanza, and Daly, *Local Politics*, 18. See also Spangenberg, “Ideology and practice of the ‘Green Economy’,” 135–7.

⁶²¹ “Weak sustainability assumes that natural capital and manufactured capital are essentially substitutable and considers that there are no essential differences between the kinds of well-being they generate (Ekins et al., 2003; Neumayer, 2003; Neumayer, 2012). The only thing that matters is the total value of the aggregate stock of capital, which should be at least maintained or ideally increased for the sake of future generations (Solow, 1993). In such a perspective: ‘it does not matter whether the

Third, in this context it is also important to introduce the term “commons”, which generally refers to any good or natural resource (e.g., land, pasture) that is cooperatively shared and managed by a community of people. The analysis of “commons governance structures” is particularly relevant here because it has a lot in common with the debate over Islamic environmental governance systems (see Chapter 4). Such traditional systems provide rules and mechanisms for the management of communal (shared) resources. Most importantly, commons-related problems also reverberate in the empirical study, as the reader will see in Chapter 6. Still, it is difficult to describe what the “commons” exactly is. Keohane and Ostrom are quoted by Keith Stewart as stating that:

“[...] what the commons means varies significantly between various authors. It can refer to public goods (commodities or services whose benefits are not depleted by an additional user and for which it is generally difficult or impossible to exclude people from its benefits even if they are unwilling to pay for them) or common property resources (goods or services for which it is difficult to exclude people from its benefits but which are depleted by additional users) (Keohane and Ostrom 1997)”.⁶²²

As observed by Stewart, the notion of “commons” presented above slightly differs from the definition given, for example, by the

current generation uses up nonrenewable resources or dumps CO₂ in the atmosphere as long as enough machineries, roads and ports are built in compensation’ (Neumayer, 2003, p1). Such a position leads to maximising monetary compensations for environmental degradations. From a weak sustainability perspective, technological progress is assumed to continually generate technical solutions to the environmental problems caused by the increased production of goods and services (Ekins et al., 2003).” Jérôme Pelenc and Tom Dedeurwaerdere, “Weak Sustainability versus Strong Sustainability” (Brief for the UN Global Sustainable Development Report, 2015), 1, accessed January 9, 2016, <https://sustainabledevelopment.un.org/content/documents/6569122-Pelenc-Weak%20Sustainability%20versus%20Strong%20Sustainability.pdf>.

⁶²² As quoted by Keith Stewart, “Avoiding the Tragedy of the Commons: Greening Governance through the Market or the Public Domain?” in *The Market or the Public Domain: Global Governance and the Asymmetry of Power*, ed. Daniel Drache (London: Routledge, 2001), note 2, accessed May 8, 2016, http://www.yorku.ca/drache/talks/pdf/apd_stewartfin.pdf.

editors of the non-academic environmental periodical *The Ecologist* in *Whose Common Future?: Reclaiming the Commons*. They paint a portrait of the commons as *a set of relations* providing “sustenance, security and independence, yet...does not typically produce commodities. Unlike most things in modern industrial society, moreover, [the commons] is neither private nor public”.⁶²³ In their view, *common property* is a central element of the public sphere, which is “the realm of democratic debate, public culture, social capital, and collectively held goods and services”.⁶²⁴ Weston and Bollier further clarify that the set of social relations characterising commons-based systems:

“may be understood less as an ideology than as an intellectual scaffolding that can be used to develop innovative legal and policy norms, institutions and procedures relative to a given resource or set of resources. These new structures, however, do not evolve of themselves, nor are they State-directed. Instead, they are animated by commoners who have the authority to act as stewards in the management of the given resource”.⁶²⁵

In its broadest sense, commons-based culture is committed to the development of a co-governance and co-production system that works within common spaces of social interaction. This complex system operates beyond state control and need not be State-sanctioned to be effective or functional.⁶²⁶ According to Weston and Bollier, commons governance systems and, more specifically, community-based natural resources management systems, escape the logic of market exchanges because they mobilize “decentralized participation on the ground”.⁶²⁷

⁶²³ Stewart, “Avoiding the Tragedy of the Commons,” 35–6.

⁶²⁴ The Ecologist, *Whose Common Future?: Reclaiming the Commons* (Gabriola Island, B.C.: New Society Publishers, 1993), 7–8; as cited in Stewart, “Avoiding the Tragedy of the Commons,” note 2.

⁶²⁵ Burns H. Weston and David Bollier, *Green Governance: Ecological Survival, Human Rights, and the Law of the Commons* (Cambridge: Cambridge University Press, 2013), 124.

⁶²⁶ Weston and Bollier, *Green Governance*, 124.

⁶²⁷ Weston and Bollier, *Green Governance*, 125.

As noted by Weston and Bollier, the natural resources of our planet can be referred to as “subsistence commons such as forests, fisheries, wild game, arable land, pastures, and irrigation and drinking water”.⁶²⁸ Indeed, in practice, these types of commons attain important sociocultural functions. As such, they have to be distinguished from Common-Pool Resources (CPRs). A CPR is either an ecosystem (e.g., wildlife, fisheries, watersheds) or, as stated by Grima and Berkes, “a good (often *depletable*) that is usually expensive to prevent others from using, though not impossible”.⁶²⁹ A CPR is also *subtractable* because “consumption or other use by one user can adversely affect all other potential and actual users”.⁶³⁰ This premise, in the present Section I, will elucidate some aspects of what has been called the “debate on the commons”, with specific reference to Garrett Hardin’s essay “The Tragedy of the Commons” (1968) and to the alternative theoretical solutions recently proposed by Elinor Ostrom and by other academic scholars.⁶³¹

⁶²⁸ Weston and Bollier, *Green Governance*, 126.

⁶²⁹ A.P. Lino Grima and Fikret Berkes, “Natural Resources: Access, Rights-to-Use and Management,” in *Common Property Resources: Ecology and Community-based Sustainable Development*, ed. Fikret Berkes (London, UK: Belhaven Press, 1989), 39.

⁶³⁰ *Ibid.*

⁶³¹ See, for example, Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action* (Cambridge, UK: Cambridge University Press, 1990). More specifically, as stated by Shirli Kopelman, J. Mark Weber, and David M. Messick, the detailed analysis of some “commons dilemmas”, i.e. “social dilemmas in which noncooperation between individual people leads to the deterioration and possible collapse of a resource”, may help the reader: (1) better understand how communal and shared local/global natural resources have been publicly managed through the application of (Western) liberal-democratic market-oriented systems; (2) identify and assess the existing game-theoretical approaches to environmental planning and management. See Shirli Kopelman, J. Mark Weber, and David M. Messick, “Factors Influencing Cooperation in Commons Dilemmas: A Review of Experimental Psychological Research,” in *The Drama of the Commons: Committee on the Human Dimensions of Global Change, National Research Council*, ed. Elinor Ostrom et al. (Washington: National Academy Press, 2002), accessed June 7, 2015, <https://www.nap.edu/read/10287/chapter/6>.

Fourth, and finally, in the last part of the present Section, the reader will be reminded that, in some cases, religiously-/spiritually-motivated ecological beliefs and traditional-customary social institutions have helped people resolve “commons dilemmas” (e.g., avoiding human overuse of communal resources) in many parts of the world. Indeed, the endorsement of deep-seated ecological beliefs has historically fostered ancient conservationist traditions and/or cooperative local natural resources management techniques, which may still offer valuable and “up-to-date” contributions to present-day sustainability planning and restoration policies. Local and indigenous communities across the world, for example, have actively managed and conserved their local habitats, while often expressing their own ecological concerns in spiritual/religious terms. For this reason, the partisans of Western-based scientific environmental management systems are now reappraising their interest in traditional forms of social cohesion and trust, as well as in indigenous methods for natural resources access, use and management.⁶³²

In Chapter 4, I will briefly explore the relationship between Islam, ecology and the commons-based system of environmental governance illustrated in Chapter 3. I will first describe the main characteristics of the Islamic economic (and social) doctrine, which is consistent with the Islamic ecological doctrine presented in Section I. Then I will spell out the action-based Islamic economic (and social) ethics. More importantly, I will delineate the implications of Shariah-based environmental jurisprudence/law (*fiqh al-bī'ah*) on commons management in the Muslim world. I will thus show the reader how and to what extent Islamic traditional ecological conservationism, as well as Islamic legal-judicial perspectives on the management of what I

⁶³² On this point, see Johnston, *Religion and Sustainability*, 94–6.

have called the “Islamic commons” (i.e., the “commons” as interpreted through the Islamic tradition) have been a source of inspiration to both contemporary Islamic eco-scholar-activists and Muslim nature conservationists worldwide.⁶³³

⁶³³ Johnston, *Religion and Sustainability*, 97. However, as Johnston has noted while commenting on Berkes et al. (1998), “traditional social-ecological systems are instructive not because the people possessed some inherently sustainable ethic or worldview, but rather because their social structures were more sensitive to perturbations in the ecological system”. Thus, it remains crucial to enquire into the local dynamics of social change, as the reader will see in Part III of this thesis.

3. Natural resources as “commons”

The Earth’s resources are a common human heritage, a fact that does not relate exclusively to ores, minerals and fossil fuels. As correctly observed by the neo-institutionalists⁶³⁴ Gibbs and Bromley, “soil, water, forests, fish and wildlife are considered to be resources when they provide means of sustenance to mankind”.⁶³⁵ The two authors subsequently point out that the Earth’s resources,⁶³⁶ which are necessary to sustain the lives of its population, deserve to be sustained indefinitely.⁶³⁷ Yet, a sustainable natural resources management system requires, first and foremost, well-functioning basic allocative and redistributive methods and processes. For example, monitoring public access and enforcing the rights to use available natural resources may be feasible institutional-legal instruments, but only to the extent that they would render resource access, use, and management consistent with a nature-based, ecological approach.⁶³⁸ In this context, it should be recalled that natural resources exist within a definite technical, economic, social, and institutional environment. Hence, the choice of allocative and redistributive instruments is never value-free.⁶³⁹ According to the economists Grima and Berkes, the institutional

⁶³⁴ For an overview on neo-institutionalist approaches to CPR governance, see, for example, Christopher P. Rodgers et al., *Contested Common Land: Environmental Governance Past and Present* (London: Earthscan, 2011), 82.

⁶³⁵ Christopher J.N. Gibbs and Daniel W. Bromley, “Institutional Arrangements for Management of Rural Resources: Common-Property Regimes,” in *Common Property Resources: Ecology and Community-based Sustainable Development*, ed. Fikret Berkes (London: Belhaven Press, 1989), 22–3.

⁶³⁶ “Resources may be defined as those components of an ecosystem which provide goods and services useful to man. [...] However, there are good ecological reasons to broaden the concept of resources to something beyond the provision of short-term utility”. See Christopher J.N. Gibbs and Daniel W. Bromley, “Institutional Arrangements for Management of Rural Resources: Common-Property Regimes,” in *Common Property Resources: Ecology and Community-based Sustainable Development* (London: Belhaven Press, 1989), 22.

⁶³⁷ *Ibid.*

⁶³⁸ Grima and Berkes, “Natural Resources,” 39.

⁶³⁹ Grima and Berkes, “Natural Resources,” 42.

arrangements people choose to adopt with regard to resource utilisation depend on “the conventions that societies establish to define their members’ relationships to resources, translate interests in resources into claims, and claims into property rights”.⁶⁴⁰ All these relationships, interests and claims, in turn, have an impact on the establishment, implementation, and reproduction of resource-use and allocation patterns worldwide. More specifically, the institutional arrangements defining common-property resource use and management traditionally bear on a set of customary rules and conventions (i.e., “systems of legal predictability”).⁶⁴¹ On this point, Gibbs and Bromley explain that these social rules are not only created and endorsed by social groups, but they also provide them with means for resolving controversial issues.⁶⁴² In other words, it is the stable acceptance of these rules that warrants both the survival of the local community and the maintenance of its resource base.⁶⁴³ For instance, the persistence over centuries of hunter-gatherers and societies made up of indigenous peoples is indicative of the efficiency, stability, resiliency, and equitability of traditional practices of communal resource management.⁶⁴⁴

Furthermore, the ownership status of a given natural resource identifies a specific category of property rights. Under this assumption, it is legitimate to ask who is actually entitled to own *common-property resources*. Property rights pertaining to resources, as Gibbs and Bromley put it, exist in the form of common property or communal property when “individuals have claims on collective goods as members of recognized groups”.⁶⁴⁵ They add, however, that the nature

⁶⁴⁰ Ibid.

⁶⁴¹ Prugh, Costanza, and Daly, *Local Politics*, 60.

⁶⁴² Gibbs and Bromley, “Institutional Arrangements,” 2.

⁶⁴³ Grima and Berkes, “Natural Resources,” 42.

⁶⁴⁴ Ibid.

⁶⁴⁵ Gibbs and Bromley, “Institutional Arrangements,” 24.

of property rights and the specification of rights to resources are not inherent to all resources, but are determined by the social rules and conventions established by the members of a given society.⁶⁴⁶ As noted by the same authors, common property is not created in a vacuum. In most circumstances, the members of an interdependent group accept to limit their individual claims on a given resource on the assumption that the other members of the group will do the same.⁶⁴⁷ Indeed, these individuals are preoccupied with the maintenance of some rules of conduct to which each of them voluntarily subscribes. This is tantamount to saying that a person would contribute to the management of a collective good only if everyone else belonging to the same group guaranteed his/her contribution to such management efforts.⁶⁴⁸ Following Grima and Berkes' line of argument, it is also true that the concept of property logically implies the exclusion of non-owners.⁶⁴⁹ Grima and Berkes explain that, in terms of access, "common property" resources (*res communes*) are not automatically available to all, whereas open-access resources (*res nullius*), where "management institutions are non-existent or have broken down", are supposed to be "free-for-all".⁶⁵⁰ In either case, however, resources are typically subject to overexploitation because of *free riders* — i.e., "individuals who fail to contribute to the management of a collective good when they expect that others will".⁶⁵¹

It is also important to note that, in recent years, community-based natural resources (i.e., "traditional commons") management systems have gained currency among economists and other social scientists.

⁶⁴⁶ Ibid.

⁶⁴⁷ Gibbs and Bromley, "Institutional Arrangements," 25.

⁶⁴⁸ Ibid.

⁶⁴⁹ Grima and Berkes, "Natural Resources," 36.

⁶⁵⁰ Ibid.

⁶⁵¹ Ibid.

Both private property rights and State-property rights, especially in situations of extreme resource scarcity and depletion, do not actually assure individuals and social groups the same access to natural resources as common-property rights do. I would argue that the case of the MENA region is particularly interesting in this respect. Several countries in the region have been increasingly affected by climate change, water scarcity, desertification, land degradation, biodiversity loss, and pollution.⁶⁵² In this specific context, it seems to me, the retrieval of communal ownership and management of natural resources may be a sustainable cure for ecological degradation, social distress, and political instability. As the reader will see in the following chapters (cf. Chapters 4 and 6), the most vulnerable and marginalised members of Muslim societies may benefit from common-property regimes, which may become a ‘lifeline’ in times of extreme material need, and especially in times of political turmoil and economic crisis.

Thus, on closer examination, the evidence consistently suggests that common-property regime members are prone to trade off some of the individual benefit obtained by a system of private-use rights, but only when there is a collective expectation that the resource will be used in an equitable and sustainable manner.⁶⁵³ For example, the self-management of collectively shared renewable resources⁶⁵⁴ can be regarded as sustainable or unsustainable according to the chosen

⁶⁵² See, for example, Swedish International Development Cooperation Agency, “Environmental and Climate Change Policy Brief – MENA,” Environmental and Climate Change Analysis by Gunilla Ölund Wingqvist and Olof Drakenberg at the request of Sida (Att.: Hazme Aykol) (Gothenburg: Environmental Economics Unit, University of Gothenburg, 2010), accessed May 6, 2015, http://sidaenvironmenthelpdesk.se/wordpress3/wp-content/uploads/2013/04/MENA_Env-CC-Policy-Brief-2010.pdf.

⁶⁵³ Gibbs and Bromley, “Institutional Arrangements,” 26.

⁶⁵⁴ Renewable resources can be defined as flow resources not exclusively owned, with critical limits above which a decrease in their flow cannot be reversed, such as in the cases of fisheries, wildlife population, forests, grasslands, and soil.

institutional arrangement that is in place at a given time. This also entails that the success of a common-property regime, as Gibbs and Bromley clearly note, depends above all on the ways in which property rights or use rights are assigned and, consequently, on the pattern of incentives given for nature conservation or depletion.⁶⁵⁵ In their view, communal natural resources totally disappear as a consequence of irresponsible user-group behaviours when all members of a group do not abide to the rules governing use and management of a collective good.⁶⁵⁶ Not surprisingly, indeed, the progressive disappearance of communal resources across the planet and the subsequent redefinition of property rights are pointed to as the major causes of global environmental and resource depletion problems.⁶⁵⁷ In the post-colonial phase, for example, the customary law systems of some developing countries were steadily replaced by State-property rights. National-state interests actually prevailed over local interests. In many circumstances, local organisational structures were abandoned, thus removing the incentives for people to conserve and protect communal (shared) resources.⁶⁵⁸ Nowadays, however, the human right to survive and flourish in a safe and healthy environment is becoming more and more relevant because it permits the fulfilment of local essential needs, which are all in some way tied to the personal goals, cultural choices, and political aspirations of different social groups. Contemporary citizens, local communities and/or indigenous groups who reclaim their own territories, as well as their own “right to land, water and food”, have brought to the fore the fundamental issues of ownership, access and

⁶⁵⁵ Gibbs and Bromley, “Institutional Arrangements,” 26.

⁶⁵⁶ *Ibid.*

⁶⁵⁷ The first source is defined by Gibbs and Bromley as the “deliberate conversion of natural resources to other forms of capital”. See Gibbs and Bromley, “Institutional Arrangements,” 30.

⁶⁵⁸ *Ibid.*

distribution of communal natural resources (which in most cases remain up to the State or to the dominant authorities in charge of giving the right a substantive meaning and content).⁶⁵⁹

Still, people's excessive individualism is one of the most alarming social problems of the current time. In his recent book *The Tyranny of Rights* (2009), the North American economist Brewster Kneen argues that when communitarian welfare is marginalised by an individualistic libertarian mentality, social trust and solidarity, communal identity, and a common sentiment for the public good are undermined and social relationships are dramatically weakened.⁶⁶⁰ Grima and Berkes argue that in many Western societies, individual self-interest has the highest value since it is the individual who expresses choices and preferences. In other contemporary societies, however, the community is the preferred decision-making environment.⁶⁶¹ Interestingly, the eighteenth/nineteenth-century Anglo-Saxon "enclosure of the commons"⁶⁶² (i.e., "the subdivision and fencing of common land into individual plots which were allocated to those people deemed to have held rights to the land enclosed"),⁶⁶³ was the systematic process that fostered the privatisation of communal natural resources in

⁶⁵⁹ Many local communities worldwide are rejecting the practice of rights advocacy because it may reinforce their dependence on the State or on large corporate powers. On this point, see Brewster Kneen, *The Tyranny of Rights* (Ottawa, Canada: The Ram's Horn, 2009), 6.

⁶⁶⁰ Kneen, *Tyranny of Rights*, 15–6.

⁶⁶¹ Grima and Berkes, "Natural Resources," 37.

⁶⁶² As explained by Ricki Levi and Daniel Mishori, "the origin of the term enclosure originates from England's Industrial Revolution era, when the Parliament issued a series of 'enclosure acts'-laws that privatised grazing and agricultural lands, 'commons' of rural communities, thereby impoverishing peasants and disintegrating their communities". Ricki Levi and Daniel Mishori, "Water, the Sacred and the Commons of Rajasthan: A Review of Anupam Mishra's Philosophy of Water," *Transcience* 6, Issue 2 (2015): 3, accessed February 8, 2016, http://www2.huberlin.de/transcience/Vol6_No2_1_25.pdf.

⁶⁶³ Simon Fairlie, "A Short History of Enclosure in Britain," *The Land*, Issue 7 (Summer 2009), n.p., accessed April 9, 2015, <http://www.thelandmagazine.org.uk/articles/short-history-enclosure-britain>.

several countries of the world. Consequently, enclosures are considered by some scholars to be deeply rooted in Western capitalistic practices of resource appropriation, use, and management. These scholars also lament that the contemporary (global) market-economy paradigm: (1) emphasises the benign nature of privatisation as the sole effective solution to global resource depletion; (2) holds natural resources under limited access conditions so that individuals can bear rights to their exclusive use and transferability. Similarly, Weston and Bollier put the blame on mainstream economists for their presumption that there is no other way to efficiently and responsibly allocate access to and use of natural resources, nor to generate material wealth and progress, other than through reliance on individual property rights and Market exchange.⁶⁶⁴ In a different, but consistent, line of argument, Grima and Berkes affirm that natural resources are costly only insofar as we treat them as commodities. The use of a resource as a factor of production imposes costs on the use of other resources;⁶⁶⁵ as a result, the social costs of production (the so-called “externalities”) may lead to permanent resource degradation or loss. In order to prevent all this from happening, the two authors suggest that, for example, “in societies in which communal-property systems predominate, government regulation and intervention may again be necessary, if only to provide legitimation for traditional authority structures”.⁶⁶⁶ This particular institutional orientation is relevant to this thesis as it can illuminate, for example, the concrete ways in which contemporary Muslim societies may harmonise traditional (Islamic) communal-property systems with State-based secular environmental governance structures and processes (cf. Chapter 4).

⁶⁶⁴ Weston and Bollier, *Green Governance*, 130.

⁶⁶⁵ *Ibid.*

⁶⁶⁶ Grima and Berkes, “Natural Resources,” 41.

As anticipated in the Introduction to Section II, unlike mainstream economists, ecological economists accept neither the narrow definition of resources as “mere factors of production” nor, as Grima and Berkes state, as “assets for the creation of human satisfaction or utility, including income”.⁶⁶⁷ Ecological economists believe that: (a) natural resources are not simply “means to an end”; and, consequently, that (b) the value of natural resources does not merely correspond to their “usefulness” or utility.⁶⁶⁸ In short, ecological economists believe that in order to reintegrate economics into nature, what is needed is to stop the economic growth phase and make the economy enter into a steady state (as all natural systems eventually do in order to sustain themselves).⁶⁶⁹ Indeed, this idea of imitating nature and natural systems is the red line of the present thesis (see, e.g., Chapter 2).

Given these premises, in the following paragraphs I will first discuss the phenomenon identified by the most influential scholars in the field as the “commodification of nature”. Then, I will explore the academic debate on the commons, and, more specifically, the “tragedy of the commons” as popularised by the biologist Garret Hardin (1968). I will then present the opposing argument that has been put forward by the 2009 Nobel Prize winner Elinor Ostrom since the 1990s. In her view, the community-based natural resources management systems historically used to sustainably administer the “commons” are resilient semi-autonomous systems that can still fruitfully coexist with states and markets. In the final paragraph, I will conclude by focusing on the “free-for-all” regime of *transboundary environmental public goods*. These “global environmental commons” (e.g., the Earth’s atmosphere, oceans,

⁶⁶⁷ Grima and Berkes, “Natural Resources,” 33.

⁶⁶⁸ Ibid.

⁶⁶⁹ Robert Costanza, “What is ecological economics?” interview conducted and edited by Ted O’Callahan. *Yale Insights*, May 11, 2010, accessed March 2, 2015, <http://insights.som.yale.edu/insights/what-is-ecological-economics>.

watersheds, etc.) can be defined as “resources with value for the world community that are beyond the jurisdiction of individual states”.⁶⁷⁰

3.1. Commodifying nature

The concept of the “commodification of nature”⁶⁷¹ has played a major role in critical environmental scholarship. Some scholars in the field contend that if we stuck to a narrow definition of resources as commodities we would erroneously refuse to recognise the interconnectedness of the various ecosystem elements and the ecological value of resources.⁶⁷² Specifically, the ascendancy of the Lockean theory on private property rights is regarded by these scholars as historically harmful to “commoners”, i.e., to those individuals and communities who access, use, and manage communal resources. In a nutshell, this theory prescribes that land that is not under the legal jurisdiction of the State and international agreements can be considered as *terra nullius*, or *empty land*.⁶⁷³ Consequently, these pieces of land are free for the taking and become valuable insofar as individuals undertake labour on them. Indeed, it is exactly this effort that would provide a moral justification for private ownership.⁶⁷⁴ To sum up, the earlier statement implies that natural resources can be used to generate material

⁶⁷⁰ Christiane Kraus, *Import Tariffs as Environmental Policy Instruments* (Dordrecht, The Netherlands: Kluwer Academic Publishers, 2000), 5.

⁶⁷¹ “The term commodification describes a modification of relationships, formerly unaffected by commerce, into commercial relationships [...]. Commodification of ecosystem services takes place through four main stages: economic framing, monetization, appropriation, and commercialization, although these stages sometimes overlap in time and are not always necessarily concomitant”. Erik Gómez-Baggethun and Manuel Ruiz-Pérez, “Economic valuation and the commodification of ecosystem services,” *Progress in Physical Geography* 35, no. 5 (October 2011): 623–4.

⁶⁷² See Fikret Berkes and M. Taghi Farvar, “Introduction and Overview,” in *Common Property Resources: Ecology and Community-based Sustainable Development*, ed. Fikret Berkes (London, UK: Belhaven Press, 1989), 20.

⁶⁷³ *Ibid.*

⁶⁷⁴ Weston and Bollier, *Green Governance*, 127.

wealth only after the application of capital and human labour.⁶⁷⁵ Ownership is thus conceived as a natural right possessed by any potential owner who is able to attach value to natural elements in order to satisfy his/her human individual needs and desires. This way of reasoning, it seems to me, apparently denies the *intrinsic value of natural elements*; more specifically, the inherent right of natural resources to exist and flourish is clearly violated, since it is only the owner who can attach an ‘added-value’ to natural resources.⁶⁷⁶ Locke’s treatment of property, however, puts significant restrictions on the accumulation of property because, as remarked by the political theorist and philosopher Alex Tuckness, “individual property is only justified if it can be shown that no one is made worse off by the appropriation”.⁶⁷⁷ Notwithstanding the *Lockean proviso* (*Two Treatises* 2.27) — which dictates that one must leave “enough and as good” for others (i.e., the sufficiency restriction) — such restrictions have been historically trumped by the formalisation of property rights on non-material elements of nature. As stated earlier, some scholars noted that ecosystems that were previously in openly accessible regimes, or in communal or public property regimes, were transformed into private

⁶⁷⁵ Berkes and Farvar, “Introduction and Overview,” 18.

⁶⁷⁶ In his article *The Tyranny of Rights*, Brewster Kneen claims that “the replacement of responsibilities by rights has, however, served the wealthy and powerful well by providing an appearance of moral principle – right to life, right to food, right to land – while obscuring the lack of concrete action to address the subject of the rights claim, thus leaving intact the structures of power”. “Everything that is designated as a ‘resource’ can be owned and traded, thus establishing its ‘value’ – market value, that is. The ‘value’ that is ‘added’ by the worker (miner, butcher, field hand) who actually transforms that resource into a product is claimed (appropriated) by the owner. The ‘value’ they add, unlike that of the worker or peasant farmer, is fictional, but nevertheless financially ‘real’ and bankable”. See Kneen, *Tyranny of Rights*, 2–3. See also Bruno Latour, *Politics of Nature* (Harvard: Harvard University Press 2004), 155–6.

⁶⁷⁷ Alex Tuckness, “Locke’s Political Philosophy,” *The Stanford Encyclopedia of Philosophy* (Winter 2012), ed. Edward N. Zalta, accessed May 12, 2015, <http://plato.stanford.edu/archives/win2012/entries/locke-political/>.

property.⁶⁷⁸ Thus, the privatisation and corporatisation of the commons have been historically prioritised over protecting both populations and ecosystems from environmentally harmful acts.

Furthermore, the mystification of natural resources tends to present them as infinite.⁶⁷⁹ Yet, if regarded as infinite in supply, these resources have no market value because valuation requires scarcity. Kneen further elaborates on this point by saying that enclosure and commodification have been used as strategies to create scarcity with the goal of putting an end to limitless natural elements.⁶⁸⁰ Conversely, as explained by Gøsta Esping-Andersen, “de-commodification” is the process through which “a service is rendered as a matter of right and a person can maintain a livelihood without reliance on the market”.⁶⁸¹ According to other scholars,⁶⁸² the economic historian Karl Polanyi is right when he stresses that economy cannot ignore social relations and has to be embedded into social life.⁶⁸³ Thus, the scholarly supporters of the “de-commodification” process call for the abolition of the commodity form as a dominant mode of socialisation.⁶⁸⁴ As observed by Kneen, this process is partly confirmed by the evidence that an ever-

⁶⁷⁸ Gómez-Baggethun and Ruiz-Pérez, “Economic valuation,” 620. See also Jim Glassman, “Neoliberal primitive accumulation,” in *Neoliberal Environments. False Promises and Unnatural Consequences*, eds. Nik Heynen, James McCarthy, Scott Prudham, and Paul Robbins (New York: Routledge, 2007), 94–7.

⁶⁷⁹ See Kneen, *Tyranny of Rights*, 92.

⁶⁸⁰ “Hence the need for carefully demarcated property lines or description and legal title, whether that be in the form of title to land, a mineral claim, or a water right”. *Ibid.*

⁶⁸¹ Gøsta Esping-Andersen, *The Three Worlds of Welfare Capitalism* (Cambridge: Polity Press, 1990), 21–2.

⁶⁸² See Christoph Hermann and Birgit Mahnkopf, “Still a Future for the European Social Model?” *Global Labour Journal* 1, no. 3 (2010): 315.

⁶⁸³ Karl Polanyi, *The Great Transformation: Politische und ökonomische Ursprünge von Gesellschaften und Wirtschaftssystemen* (Frankfurt am Main, Germany: Suhrkamp Verlag, 1978), 329.

⁶⁸⁴ In this respect, Polanyi maintains that within a modern capitalist society, relative de-commodification can be better understood as a “process in which the social reproduction of society and its members becomes gradually less dependent on market-mediated exchange and private accumulation”. *Ibid.*

increasing number of citizens and local communities across the world are willing to take public responsibility to create a political climate in which natural goods are regarded as public goods subjected to public policy.⁶⁸⁵ Against this background, I would argue that “de-commodification” processes are under way in the world, and that global civil society is now engaged in claiming a non-market model of decent and sustainable livelihood, as the reader will discover in Chapter 6.

3.2. Weak sustainability

Some scholars in the field warn that the so-called “commodification of nature” has dominated mainstream economic and financial strategies, projects, and activities for sustainability and sustainable development. The mainstream economists who have adopted this *weak sustainability perspective* are thus insensitive to the negative ecological and socio-economic consequences arising from the massive destruction of *natural capital*: natural assets such as soil, water, air, etc. (cf. Introduction to Section II).

Business-oriented private multinational corporations, highly-industrialised nations, and supranational authorities in charge of developing a new “green and sustainable economy” are often wedded to the philosophy of *ecological/environmental modernisation*. This theory suggests that the pathway toward capitalist “hyper-modernity” and “super-industrialisation” is not only inevitable, but also generally desirable when tackling current ecological sustainability problems. In

⁶⁸⁵ Kneen, *Tyranny of Rights*, 45. For example, the famous slogan “less government, less market, more commons”, as remarked by the Italian jurist Ugo Mattei, is meant (a) to describe the three-fold path toward the creation of a governance system for “transnational commons”; and (b) to put an end to the current legacy of private property systems in natural resource management. See Ugo Mattei, “The State, the Market, and some Preliminary Questions about the Commons,” *IUC Research Commons*, International University College of Turin, 2011, accessed May 1, 2015, http://ideas.iuctorino.it/RePEc/iuc-rpaper/1-11_Mattei.pdf.

simple words, this optimistic and self-fulfilling narrative advocates, as the Australia-based economist Clement Tisdell informs us, that economic growth is the main antidote to resource-scarcity.⁶⁸⁶ As rightly observed by the Canadian Professor Fikret Berkes, the partisans of this theory agree on the fact that scarce natural resources can be treated as mere commodities.⁶⁸⁷ In this respect, other scholars argue that modern capitalist societies follow market-driven economic and technological concerns when dealing with “eco-political” problems.⁶⁸⁸ Therefore, present-day regulatory governance systems depend on legal and technical tools that capture and enclose ecological goods and services at the exclusive advantage of private interests. The same scholars warn that the worst-case scenario may occur when what they have called “market-state alliance” mobilises specific instances of environmental degradation as opportunities to make extra profits.

Moreover, other groups of scholars claim that in many circumstances profitable investments in environmental management are subordinate to free-market commercial principles and methods. Indeed, this is regarded as the very nature of *market environmentalism*. These scholars further maintain that when the long-term social responsibility

⁶⁸⁶ Clement A. Tisdell, *Natural Resources, Growth, and Development: Economics, Ecology and Resource-Scarcity* (Westport, CT: Praeger, 1990), 1. “The basic economic problem is considered to be how to manage or administer resources so as to minimize scarcity, that is, to minimize the “gap” between individuals’ demand for commodities and the available supply of these. The scarcity problem explains the interest of economists in the efficiency of alternative social mechanisms for resource allocation and their interest in economic growth and in development”. See also Tisdell, *Natural Resources*, 3. See also Anna Couturier and Kannika Thaimai, “Eating the Fruit of the Poisonous Tree? Ecological Modernisation and Sustainable Consumption in the EU,” *IPE Working Papers* 20 (2013): 3. Berlin School of Economics and Law, Institute for International Political Economy (IPE), accessed May 8, 2016, http://www.ipe-berlin.org/fileadmin/downloads/working_paper/ipe_working_paper_20.pdf.

⁶⁸⁷ Berkes, ed., *Common Property Resources*, 19.

⁶⁸⁸ Couturier and Thaimai, “Eating the Fruit,” 2.

of States,⁶⁸⁹ business enterprises, and corporations is exclusively based on a market-centric strategy (according to which, in the context of general free-market competition, corporate interests can best be achieved by following the profit-maximisation imperative), global ecosystem processes risk being disrupted by the generation of, for example, a huge *ecological debt*, i.e., an increasing gap between the ecological health of the Global North and South (at the expense of the latter).⁶⁹⁰ They also affirm that when major investors and mainstream capitalists adopt this brand of ‘predatory’ business governance, which is aimed at expanding commercial and financial transactions by invading “the non-human world as a key part of its rationale”,⁶⁹¹ nature and its components are seriously at stake.⁶⁹²

In sum, the above-mentioned scholars claim that the logic of market environmentalism coincides with a specific approach to environmental governance, which is intended (a) to establish private property rights for ecosystem services with public good characteristics; (b) to accept environmental externalities; and (c) to use market-based instruments for nature conservation and protection.⁶⁹³ Economists like Terry Anderson and Donald Leal point out, for example, that these

⁶⁸⁹ According to Keith Stewart (2001), the so-called “marketization of the state” has spilled over into the realm of environmental governance. See Stewart, “Avoiding the Tragedy of the Commons,” 203.

⁶⁹⁰ On the religious ideas and reminiscences about the concept of “debt” and “gift economy”, see, for example, Hartman, “Economics,” 148. On the concept of “ecological debt”, see Gert Goeminne and Erik Paredis, “The Concept of Ecological Debt: An Environmental Justice Approach to Sustainability, Calling for Radical Transitions in Industrialised Countries,” in *Connected Accountabilities. Environmental Justice & Global Citizenship*, ed. Sivaram Vemuri (Inter-Disciplinary Press, 2009), 37 ff.

⁶⁹¹ Noel Castree, “Neoliberalising Nature: The Logics of Deregulation and Reregulation,” *Environment and Planning A* 40, no. 1 (2008): 143, accessed June 7, 2015, DOI 10.1068/a3999.

⁶⁹² See Stewart, “Avoiding the Tragedy of the Commons,” 202.

⁶⁹³ See Karen Bakker, “Neoliberalizing Nature? Market Environmentalism in Water Supply in England and Wales,” *Annals of the Association of American Geographers* 95, Issue 3 (August 2005): 542–65, accessed June 20, 2015, DOI 10.1111/j.1467-8306.2005.00474.x.

“enviro-capitalists” protect environmental resources by expanding market institutions in general, and by relying on property rights, voluntary exchange, and common law liability and rules, in particular. According to the two authors, the subsequent inclusion of new ecosystem functions into pricing systems and market relations produces a sort of “commodity fetishism”. That is, the “use values” embedded in ecosystem services are expressed as “exchange values” through monetisation.⁶⁹⁴ Karl Polanyi defines this “commodity fiction” as the attempt to incorporate “natural things” (which are not produced by humans) into markets after having converted them into tradeable commodities.⁶⁹⁵ For example, it is not uncommon for national governments, as Danish Professor Karsten Klint Jensen has noted, to rely on market mechanisms in order to address environmental or climate governance problems.⁶⁹⁶ However, as noted by Nathaniel L. Pelletier, “the proliferation of marketized forms of nature, from carbon emissions markets to debt-for-nature swaps to water privatization” might be morally problematic.⁶⁹⁷ Some contemporary scholars argue, for instance, that the “commodification of nature” as a feasible way to satisfy a desperate search for short-term profit has been accomplished through the activation of carbon emission trading (Emission Trading

⁶⁹⁴ See, for example, Terry L. Anderson and Donald R. Leal, *Free Market Environmentalism* (New York: Palgrave, 2001).

⁶⁹⁵ See Polanyi, Karl. *The Great Transformation: The Political and Economic Origins of Our Time* (Boston: Beacon Press, 2001 [1944]), 121–8.

⁶⁹⁶ Karsten Klint Jensen, “Climate change and motivation: The obstacle from conflicting perspectives,” in *The Politics of Sustainability: Philosophical Perspectives*, eds. Dieter Birnbacher and May Thorseth (Abingdon, Oxon; New York, NY: Routledge Studies in Sustainability, 2015), 15.

⁶⁹⁷ See Nathaniel L. Pelletier, “What’s at stake? Ecological Economic Sustainability and the Ethical, Environmental, and Policy Implications for Global Livestock Production” (PhD diss., Dalhousie University, 2010), accessed June 7, 2015, http://dalspace.library.dal.ca/bitstream/handle/10222/12821/Pelletier.2010_DISSERTATION_FINAL_DRAFT.pdf. See also Karen Bakker, “Neoliberal nature, ecological fixes, and the pitfalls of comparative research,” *Environment and Planning A* 41 (2009): 1781.

Scheme, ETS) to mitigate climate change, as well as through PES (Payments for Ecosystem Services)/REDD+ schemes.⁶⁹⁸ The same scholars contend that tradeable pollution rights schemas have been sponsored by the planet's most polluting (and most CO₂-emitting) countries and have been incorporated in legal texts by international institutions and organisations. According to these scholars, market-based carbon trading systems do not eliminate the negative externalities created by the global economic agents.⁶⁹⁹ Jensen states in this respect that:

what is perceived as wrong about tradable emission permits is that they accept self-interested economic calculations where moral motivation is called for. Emissions are perceived as morally wrong. Tradable emission permits accept that one can act wrongly by paying one's way. But this is not perceived as morally acceptable behavior. I believe a similar skepticism can be observed regarding economic valuation of environmental goods. Economists argue that these goods will not be properly protected unless they are priced according to their true value. When economists put a market price on environmental goods, they simulate that there are private goods, but people perceive them as public goods that should be valued through political priorities.⁷⁰⁰

⁶⁹⁸ Payments for Ecosystem Services (PES) have been defined as conditioned and voluntary transactions between at least one provider and one beneficiary, of well-defined ecosystem services. Recent schemes for international PES include the Clean Development Mechanisms (CDMs) launched at the 6th Conference of Parties (COP-6) of the Kyoto Protocol, the Joint Action Mechanisms and the so-called Reducing Emissions from deforestation and Forest Degradation (REDD) and REDD+ programmes. For further details on this topic, see Gómez-Baggethun and Ruiz-Pérez, "Economic valuation," 619.

⁶⁹⁹ For example, Patrick Bond is categorical on this point. He argues that so-called "climate crisis-capitalism" increases the ecological costs of market-based strategies. He also states that "climate-crisis capitalism is the global environmental managerial elites' strategy of turning a medium/long-term humanity-threatening prospect, already responsible for extreme, immediate damage to infrastructure and agriculture, into a short-term source of speculative profit". See Patrick Bond, "Climate-crisis capitalism, global environmental governance and geopolitical competition in emissions laxity," (article presented at the International Labour Rights Information Group Globalization School on Capitalism and the Environment, October 3, 2011), 2, accessed May 8, 2015, <http://amandla.org.za/climate-crisis-capitalism-global-environmental-governance-and-geopolitical-competition-in-emissions-laxity-by-patrick-bond/>.

⁷⁰⁰ Jensen, "Climate change and motivation," 15.

Other scholars in the field contend that this persistent pattern of economic-financial development appears to be a threat to global ecological health, social welfare and equity. In their view, the unconditioned global submission to economic and financial measures meticulously planned by some political and managerial elites (and by their pressure groups often absorbed into the political arena by cooptation) is failing to address the real and structural causes of socioeconomic injustices and income allocation asymmetries across the globe.⁷⁰¹ Growth pessimists argue, for example, that climate change, natural resource depletion, and ecological deterioration are detrimental to economic growth as “we” (affluent countries) know it.⁷⁰² Similarly, biological economists, as Tisdell states, exclude the possibility that technological progress alone will be able to reduce or counteract the forces that make commodities scarce.⁷⁰³ As a matter of fact, present-day economic crises, which are all in some way related to resource depletion, have challenged the “consumer society” model. Such model seems to originate from the relationship between market-based environmental management and the culture of consumption.⁷⁰⁴

To conclude, some considerations can be made here. First, as stated by the American political economist Michael Parenti, according to transnational corporate capitalism “the fate of the biosphere seems a far-off abstraction compared to the fate of one’s immediate investments”.⁷⁰⁵ Thus, high-level national and international institutions, it seems to me, are still pointedly insensitive to the adoption of a

⁷⁰¹ Indeed, migration is the ultimate element of this causal chain and environmentally-induced migrations are key risk indicators of social exclusion, marginalisation and unequal access to natural resources.

⁷⁰² Tisdell, *Natural Resources*, 2–3.

⁷⁰³ Tisdell, *Natural Resources*, 3.

⁷⁰⁴ Couturier and Thaimai, “Eating the Fruit,” 2.

⁷⁰⁵ Michael Parenti, “Why the Corporate Rich Oppose Environmentalism,” *State of Nature* 2 (Winter 2006), accessed July 6, 2015, <http://www.stateofnature.org/corporateRich.html>.

redistributive, ecological approach simply because they have no strategic interest in coping with environmental and social justice issues. For the sake of higher self-profits, some State and private actors agree to strike a “neoliberal deal” that allows the prosecution of what David Harvey has called “accumulation by dispossession”.⁷⁰⁶ Second, in line with the view of ecological economists, I would argue that the global hotspots of environmental degradation will increasingly suffer from the negative impact of this “market rationality”. Indeed, global markets often bypass or, at worst, violate the social rights of self-managing individuals and communities without their consent and outside their spheres of autonomy and responsibility. Third, fresh attempts to ‘ecologically reform’ certain financial, industrial, and management techniques could, however, hamper the uncontrolled expansion of market trade and *laissez-faire* market institutions to previously non-marketed areas (as happens with some ecosystem services that have been monetised and commercialised). Fourth, encouraging personal well-being through respect for life and preservation of ecosystems is a necessary but insufficient condition to halting the so-called “commodification of nature”. As observed by the Swedish scholar Rasmus Karlsson, attempts at developing a strong sense of individual moral responsibility on environmental issues may have the side effect

⁷⁰⁶ “The commodification and privatization of land and the forceful expulsion of peasant populations; the conversion of various forms of property rights (common, collective, state, etc.) into exclusive property rights; the suppression of rights to the commons; commodification of labour power and the suppression of alternative (indigenous) forms of production and consumption; colonial, neocolonial, and imperial processes of appropriation of assets (including natural resources); monetization of exchange and taxation, particularly of land; the slave trade (which continues particularly in the sex industry); and usury, the national debt and, most devastating of all, the use of the credit system as a radical means of accumulation by dispossession.” David Harvey, *The New Imperialism* (New York: Oxford University Press, 2003), 144–5. See also Jim Glassman, “Primitive Accumulation, Accumulation by Dispossession, Accumulation by ‘Extraeconomic’ Means,” *Progress in Human Geography* 30, no. 5 (October 2006): 608–25, accessed July 1, 2015, DOI 10.1177/0309132506070172.

of depoliticising the struggle for sustainability.⁷⁰⁷ Last, the hope now is that the relocalisation of some economic and social activities, as well as the collective reappropriation of communal resources and territories by individuals and social groups across the world may counterbalance the negative influence of the so-called “carbon-based” social order.⁷⁰⁸

3.3. The commons dilemma

Contemporary environmental policy is torn between a corporate-led attempt to privatize the commons, and efforts to build a vibrant public domain capable of governing the commons in a more democratic, equitable and ecologically sustainable manner. To date, it is the former political project, which has prevailed. The ‘tragedy of the commons’, i.e., the destruction of collective assets, such as eco-systems, through the pursuit of private gain, continues unabated while the institutions capable of defending the environmental commons against new enclosures and encroachments are being systematically weakened.⁷⁰⁹

As stated in the previous paragraph, some conventional market activities may become ecologically destructive and antisocial when natural resources are merely converted into marketable products for private economic gains. Regrettably, even when national legislation is adopted either to regulate, or to reduce the threat posed by these market-led “enclosures of the commons”, formal law is seldom enforced or implemented. To date, the available environmental governance models and policy prescriptions (e.g., central regulation, privatisation, joint jurisdiction, etc.) have indeed proved to be ineffective, illusory and,

⁷⁰⁷ Rasmus Karlsson, “Individual Guilt or Collective Progressive Action? Challenging the Strategic Potential of Environmental Citizenship Theory,” *Environmental Values* 21, no. 4 (November 2012), accessed June 19, 2015, DOI <https://doi.org/10.3197/096327112X13466893628102>.

⁷⁰⁸ “Relocalization is a strategy to build societies based on the local production of food, energy and goods, and the local development of currency, governance and culture. The main goals of relocalization are to increase community energy security, to strengthen local economies, and to improve environmental conditions and social equity. The relocalization strategy developed in response to the environmental, social, political and economic impacts of global over-reliance on cheap energy”. See Post Carbon Institute (PCI), <http://www.postcarbon.org/relocalize>.

⁷⁰⁹ Stewart, “Avoiding the Tragedy of the Commons,” 202.

above all, unsustainable. Recently, the most significant scholarly contributors from various social science disciplines have suggested that the pursuit of collective social interest can be better addressed by reviving and protecting the “commons”. This process of “commoning” refers to a set of cooperative relations and social practices through which “commoners” are able to access, use and manage collectively-shared natural resources. In Weston and Bollier’s words, “access, use and management of common-pool resources require social trust and cooperation and there is no space left for human beings portrayed as autonomous, selfish, rational individuals”.⁷¹⁰ In other words, the capitalistic idea of *Homo oeconomicus*⁷¹¹ is losing its grip on reality.

Several decades ago, however, the American ecologist Garrett Hardin’s influential essay, which appeared in *Science* in 1968, announced the “inevitable collapse of any shared resource”.⁷¹² Hardin asserts that the permanent conflict between private rationality and collective responsibility has brought about the so-called “tragedy of the commons”. In his view, when the supply of open-access, “free-for-all”, and commonly owned resources is smaller than the amount taken by their users, a remorseless tragedy occurs and free-riding is the rule. As observed by Katja Neves-Graça, the inevitable destruction of the “commons” (“under conditions of population pressure”) resides in his assumption that “to maximize personal (economic) gain, people

⁷¹⁰ Weston and Bollier, *Green Governance*, 132.

⁷¹¹ “*Homo oeconomicus* always wants more goods, is always rational and consistent with his or her choices, always has perfect information about goods and prices, and always acts to maximize personal satisfaction. That satisfaction comes only from things he or she has personally consumed (or paid for, in the case of gifts given to others). *Homo oeconomicus* does not vote and cares nothing about the beauty of a smog-free sunrise or the honest regard of family and peers”. Prugh, Costanza, and Daly, *Local Politics*, 78.

⁷¹² Garrett Hardin, “The Tragedy of the Commons,” *Science* 162, Issue 3859 (December 1968): 1243, accessed May 11, 2015, DOI 10.1126/science.162.3859.1243.

compete to extract as much as possible from open-access resources, even at the expense of depleting them”.⁷¹³ She adds that, in Hardin’s view, “free-for-all” commons vanish because “in the absence of restrictions people acting on the basis of self-interest tend to extract as much as possible from resources” and nothing can preclude the onset of this dramatic event.⁷¹⁴ Similarly, Grima and Berkes explain that, according to Hardin’s logic, the commons dilemma occurs when too many users contend for a limited resource.⁷¹⁵

Garrett Hardin illustrates the “tragic” nature of the commons in the following way:

Picture a pasture open to all. It is to be expected that an individual herdsman will try to keep as many cattle as possible on the commons. [...] But this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is locked into a system that compels them to increase his herd without limit — in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all.⁷¹⁶

Further, the sociologist Katja Neves-Graça argues that Hardin’s argument, which relies on the Malthusian theory of population,⁷¹⁷ develops a formalistic approach to economics. She explains that Hardin identifies a causal relationship between self-interested economic behaviour and the degradation of the “commons” without taking into consideration the impact of contextual and situational factors on human motivation and behaviours.⁷¹⁸ Neves-Graça agrees with Schneider (1974), who states that “the agent of economic behaviour is portrayed

⁷¹³ Katja Neves-Graça, “Revisiting the tragedy of the commons: Ecological dilemmas of whale watching in the Azores,” *Human Organization* 63, no. 3 (Fall 2004): 290–1.

⁷¹⁴ Ibid.

⁷¹⁵ Grima and Berkes, “Natural Resources,” 43.

⁷¹⁶ Hardin, “Tragedy of the Commons, 1244.

⁷¹⁷ See also John Stuart Mill, *Principles of Political Economy*, ed. James Laurence Laughlin (New York: D. Appleton & Co., 1884); and Paul R. Ehrlich, *The Population Bomb* (New York: Ballantine Books, 1968).

⁷¹⁸ Neves-Graça, “Revisiting the tragedy,” 291.

[by Hardin, *editor's note*] as an 'ahistorically rational' individual who considers 'purely' economic factors in the process of decision making".⁷¹⁹ Basically, Hardin believes that public intervention (State intervention or international governance)⁷²⁰ could enhance environmental responsibility by creating a system of mutual coercion, which, as he states, is "mutually agreed upon by the majority of the people affected".⁷²¹ Thus, he contends that a coercively-imposed regime of private property rights and markets (privatisation) will eventually solve the problem of how to reduce the over-exploitation and pollution of natural resources.⁷²²

Furthermore, Hardin's "tragedy of the commons" is depicted by some scholars and experts in the field as a problem that may occur even when we consider the case of the earthly atmosphere, which is a *global common good*. As Wallimann-Helmer points out while commenting on global climate-mitigation agreements, reducing GHG emissions to mitigate climate change may serve the common good, but the reason for the parties' aversion to entering into such agreements is that other nation-states could reasonably engage in free-riding behaviour. It is interesting to note, though, that the economist Elinor Ostrom and her colleagues have found that the "tragedy of the commons" among parties can in some ways be averted (see par. 3.4 below). Indeed, this "tragedy", which is determined by an improvident use and unregulated access to the "commons",⁷²³ can be avoided either by developing a new

⁷¹⁹ Ibid.

⁷²⁰ See Levi and Mishori, "Water, the Sacred and the Commons of Rajasthan," 3.

⁷²¹ Hardin, "Tragedy of the Commons," 1247.

⁷²² Before Hardin's article, H. Scott Gordon (1954) "translated the commons dilemma into the concepts of market economics". As cited in Grima and Berkes, "Natural Resources," 45.

⁷²³ Ostrom, *Governing the Commons*, 3. On this point, see also Ivo Wallimann-Helmer, "The liberal tragedy of the commons: The deficiency of democracy in a changing climate," in *The Politics of Sustainability: Philosophical Perspectives*, eds. Dieter

regulatory framework, or by relying on an existing traditional one. Following Ostrom's argument, the philosopher Stephen M. Gardiner affirms that the "tragedy of the commons" is likely to become a simple co-ordination problem if reciprocal influence and social interaction occur between the parties involved.⁷²⁴ As noted by Wallimann-Helmer, Gardiner further claims that the "dilemmatic decision structure" concerning, for example, international agreements on mitigating GHG emissions is tremendously risky, especially in absence of a regulatory framework, because climate change is an *intergenerational* challenge, i.e., it "involves parties of different generations".⁷²⁵ In short, Gardiner argues that the *real tragedy of the commons* arises because, in the absence of an institutional regulatory framework to ensure the preservation of the "commons" (e.g., the global atmosphere): (1) the living parties (namely, nation-states) that negotiate a global agreement on GHG emissions cannot regularly interact with future parties (namely, future generations); and, as a consequence, (b) the "simple co-ordination problem cannot arise" at all.⁷²⁶

3.4. Governing the commons

The social scientist and 2009 Nobel Laureate Elinor Ostrom of Indiana University rediscovered the neglected history of the "commons" as a governance approach that is still useful today.⁷²⁷ According to Ostrom, the tragedy narrative described by Hardin presents a scenario that does not correspond to *res communes*, but rather to an unmanaged open-access or "free-for-all" regime. Her scientific

Birnbacher and May Thorseth (Abingdon, Oxon; New York, NY: Routledge Studies in Sustainability, 2015), 21.

⁷²⁴ Wallimann-Helmer, "The liberal tragedy of the commons," 21.

⁷²⁵ Wallimann-Helmer, "The liberal tragedy of the commons," 22.

⁷²⁶ *Ibid.*

⁷²⁷ Weston and Bollier, *Green Governance*, 147.

work mainly focused on the institutional systems for governing Common-Pool Resources (CPRs) — i.e., “collective resources over which no one has private property rights or exclusive control, such as fisheries, grazing lands, and groundwater, all of which are certainly vulnerable to a ‘tragedy of the commons’ outcome”.⁷²⁸

In her pioneering book *Governing the Commons: the Evolution of Institutions for Collective Action* (1990), Ostrom’s critique of the theoretical foundations of policy analysis (as it is applied to the study of natural resources management systems), as she herself admits, is aimed at developing the necessary intellectual tools “to understand the capabilities and limitations of self-governing institutions for regulating many types of resources”.⁷²⁹ She offered theoretical and empirical alternatives to the three influential models that had been most frequently used to provide a foundation for recommending state or market solutions to resource overuse: *The tragedy of the commons*; *The Prisoner’s Dilemma game*; *The logic of collective action*. In the same volume, she intended to demonstrate that, by adopting an institutional mode of analysis, it is possible to find governance solutions that go beyond states and markets.⁷³⁰ Thus, her main attempt was to explain how traditional communities of people had historically imagined different ways of governing the commons. Despite the differences among long-enduring CPR institutions, Ostrom identified seven basic design principles which characterise some of the most successful commons structures.⁷³¹

⁷²⁸ Ibid.

⁷²⁹ Ostrom, *Governing the Commons*, 2.

⁷³⁰ Ibid.

⁷³¹ Clearly defined boundaries; congruence between appropriation and provision rules and local conditions; collective-choice arrangements; monitoring; graduated sanctions; conflict-resolution mechanisms; minimal recognition of rights to organize. See Ostrom, *Governing the Commons*, 90, Table 3.1.

Ostrom summed up her research programme (which was carried out in 2010 with her colleagues Poteete and Janssen) in a more recent article, in which it is stated that:

A large number of variables increase the likelihood that self-organization could be effective in solving collective action problems. Among the most important are the following: (1) reliable information is available about the immediate and long-term costs and benefits of actions; (2) the individuals involved see the common resource as important for their own achievements and have a long-term time horizon; (3) gaining a reputation for being a trustworthy reciprocator is important to those involved; (4) individuals can communicate with at least some of the others involved; (5) informal monitoring and sanctioning is feasible and considered appropriate; and (6) social capital and leadership exist, related to previous successes in solving joint problems.⁷³²

The academic debate on the “commons” became more fashionable in 2005, when Ostrom started to deal with larger-scale (intrastate/transboundary/planetary) CPRs (e.g., global commons such as the biosphere, the climate, or the oceans). According to Weston and Bollier, her central argument is that “appropriation, provision, monitoring enforcement, conflict resolution and governance activities are organized in nested enterprises” in which *polycentric governance* “helps assure that decision-making can occur at the location closest to the resource and commoners themselves, which tends to enhance the quality of decision-making and its legitimacy” (subsidiarity principle).⁷³³ Weston and Bollier also admit that, compared to top-down bureaucratic systems, this system of governance, which is more distributed and flexible, is able to better respond to the dynamic, complex realities of natural ecosystems.⁷³⁴ However, they contend that present-day attempts at building up a new architecture of environmental law and policy that may support and protect (global) “commons”

⁷³² Weston and Bollier, *Green Governance*, 183–84.

⁷³³ Weston and Bollier, *Green Governance*, 153.

⁷³⁴ Weston and Bollier, *Green Governance*, 211.

demands a more coherent normative and institutional framework.⁷³⁵ For example, *active communing*, which is based on core principles of trust and reciprocity, may facilitate collective participation in the shared governance of natural resources. Thus, in order to genuinely protect the “environmental/natural commons”, one has to trace out the operational, collective and constituent rules that “commoners” perceive as fair and legitimate. That is, human rights and the rights of nature ought to be respected both in State and customary law systems. This new “ethics of the commons” might help States limit both the monetisation and the “enclosure” of shared assets, as well as to minimise the socio-economic inequities and/or the ecological harm caused by these ‘predatory’ market activities. In other words, communal or shared natural resources can be efficiently protected from ecological damage to the extent that private property systems serve the common good instead of particularistic privileges. Thus, I would fundamentally agree with those academics who maintain that the systems of the State, Market, and Commons ought to cooperate in order to allow commons-based governance systems to function effectively, as well as to address large-scale environmental/sustainability problems.⁷³⁶

3.5. Transboundary environmental problems

Now that we have outlined the academic debate on the “commons”, it is necessary to turn back to the general concept of “public good” since global environmental quality and sustainability can be regarded as *pure public goods*. As partially anticipated in the previous paragraphs, most natural/environmental resources have been classified by scholars and experts as public goods having basic or original properties. The term “public goods”, however, is problematic.

⁷³⁵ See Weston and Bollier, *Green Governance*, ch. 7.

⁷³⁶ On this point, see, for example, Weston and Bollier, *Green Governance*, 106.

Economic textbooks usually define pure public goods as those that are *non-rival* in consumption and that have *non-excludable* benefits.⁷³⁷ The former characteristic refers to the fact that one person's or one group's consumption of a good does not diminish either its value or its availability to others; the latter entails that people cannot be prevented from enjoying the benefits derived from the good, regardless of whether the individuals pay for it or not.⁷³⁸ Furthermore, as stated earlier, public goods and commons dilemmas⁷³⁹ prevail when individual rationality leads to collective irrationality (i.e., the free riding problem presented at the beginning of Chapter 3).⁷⁴⁰ Specifically, "non-excludability" gives to rational actors the possibility to make use of a public good without contributing to its provision. However, as observed by the sociologist Peter Kollock, unlike public goods a distinctive feature of CPRs is "the *subtractability* of the benefits (the opposite of being non-rival)".⁷⁴¹

This stated, it is worth recalling that game theory has been widely used as a theoretical framework for the analysis of public goods and

⁷³⁷ "A good is usually termed non-excludable if the costs of excluding individuals from consuming the good are very high". See David Zilberman, "Public Goods (Chapter 7)," Power Point Presentation, accessed June 1, 2015, http://www.ssc.wisc.edu/~scholz/Teaching_441/Chapter7.pdf. See also Inge Kaul and Ronald U. Mendoza, "Advancing the Concept of Public Goods," in *Providing Global Public Goods: Managing Globalization*, eds. Inge Kaul et al. (New York: Oxford University Press, 2003).

⁷³⁸ "Some indivisible goods are *necessarily* non excludable, or practically so (clean air and many other environmental public goods, for example); others can be supplied in either the excludable or non-excludable mode (as can roads, bridges, parks, and so on)". See Michael Taylor and Hugh Ward, "Chickens, Whales, and Lumpy Goods: Alternative Models of Public-Goods Provision," *Political Studies* 30, no. 3 (1982): 351.

⁷³⁹ Social dilemmas reflect the tension between individual and collective rationality. Thus, a 'deficient equilibrium' is reached because there is at least one other outcome in which everyone is better off, but nobody has the incentive to change their behaviour. See Peter Kollock, "Social Dilemmas: Anatomy of Cooperation," *Annual Review of Sociology* 24 (1998), 184.

⁷⁴⁰ Kollock, "Social Dilemmas," 183.

⁷⁴¹ Kollock, "Social Dilemmas," 190–1.

Common-Pool Resource (CPR) problems.⁷⁴² As observed by some scholars, economists are mainly concerned with public goods because market failures may occur in the private market provision of both *pure and impure public goods*.⁷⁴³ In economics, public goods are therefore depicted as a potential source of market failure, and environmental problems are generally viewed as an application of market failure because of externalities.⁷⁴⁴ Externalities come about whenever the behaviour of a given person affects the situation of other persons without the explicit agreement of that person or persons.⁷⁴⁵ In other words, market failures result in the under-provision of public goods despite the fact that their provision would have made everyone better off. Similarly, policy-makers are particularly sensitive to the free-rider problem because the funding of public goods and the political legitimacy of public provision are seriously put at risk. Thus, temptations to free-ride and the problem of providing public goods have been extensively addressed by recurring to game theoretical methods. Different versions of the Prisoner's Dilemma (PD) game have been applied to deal with (national) public-goods problems. Since the 1960s, most, if not all, social scientists have agreed on the fact that the provision of public goods is subject to the free-rider problem.⁷⁴⁶ However, game-theoretical approaches to problems of public-good

⁷⁴² See for example Elinor Ostrom, Roy Gardner, and James Walker, *Rules, Games, and Common-Pool Resources* (Ann Arbor, MI: The University of Michigan Press, 1994).

⁷⁴³ See, for example, John Leach, *A Course in Public Economics* (Cambridge: Cambridge University Press, 2004), ch. 12.

⁷⁴⁴ Alfred Endres, "Game Theory and Global Environmental Policy," *Poiesis & Praxis* 3, Issue 1 (October 2004): 125, accessed March 7, 2015, DOI10.1007/s10202-003-0059-9.

⁷⁴⁵ See J. M. Buchanan and W. C. Stubblebine, "Externality," *Economica* 29 (November 1962): 371–84.

⁷⁴⁶ See Paul A. Samuelson, "The Pure Theory of Public Expenditure," *Review of Economics and Statistics* 36, no. 4 (November 1954): 387–9; Hardin, "Tragedy of the Commons", cit.; Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups* (Cambridge, Mass.: Harvard University Press, 1971 [1965]).

provision and collective action, including the standard analysis of the PD game, cannot be a fit-for-all methodology. Surprisingly, the horizon of cooperative behaviour is increasingly widening. Some contemporary scholars have found, for example, that people tend to contribute to public goods in spite of the strong incentives to free-ride. In current times, local communities worldwide are increasingly engaged in cooperative endowments and it is not rare to find both individuals and social groups cooperating and/or voluntarily sharing local natural resources with others.

Within this evolving field of research, new policy approaches have been introduced by contemporary scholars in order to discuss, for example, the novel nature of *transboundary environmental public goods*, i.e., potable water, clean air, the ozone layer, functioning global ecosystems, and so forth. These scholars basically maintain that whenever these non-excludable resources are made private or exclusive, the very fact of them having been made private or exclusive results from a deliberate policy choice rather than from any inherent feature of such resources. Further, since the effective and sustainable management of certain goods depends on societal claims, the essential needs of the general public (e.g., civil society, citizens) and the processes taking place in the political domain are two important variables to be readdressed. According to scholars like Kaul and Mendoza, an expanded definition of public goods is thus required. Based on their revised definition (which I would agree with), the properties of goods should be conceived as dynamic components, because they “can change from being public to private and from private to public”.⁷⁴⁷ In many cases, goods exist as *social constructs* since they result either from policy choices or from other collective human actions.

⁷⁴⁷ Kaul and Mendoza, “Advancing the Concept,” 3.

In addition, they note that we have to distinguish between the case of a good having the potential of being public, and that of a good being *de facto* public.⁷⁴⁸ In this respect, Kaul and Mendoza state that “goods are *de facto* public if they are nonexclusive and available for all to consume”.⁷⁴⁹ In their view, the “equivalence of publicness” in the provision of public goods at the *international level* is the principle according to which the stakeholders in a transboundary environmental public good ought to coincide with the group of participants who are in charge of negotiation matters.⁷⁵⁰ Still, it is difficult to make the taxonomy of these global public goods consistent with this new conception of publicness (i.e., goods are open to all and their benefits accrue to all). For this reason, the provision of global public goods is a very challenging objective. This definitional reform also sheds light on the importance of *inclusiveness*, here seen as the main determinant of *publicness*. However, inclusiveness is not always benign. For example, the current multilateral agreements addressing global public goods, which usually include a large number of signatories, seldom succeed in achieving their aims. Thus, there is no evidence of the positive correlation between the magnitude of the global benefit and the number of parties to an agreement. Indeed, it is possible to achieve better cooperative arrangements with a smaller coalition of states.⁷⁵¹

Besides, it is not necessarily true that public goods have to be provided only by the State.⁷⁵² In a multi-actor global public sphere

⁷⁴⁸ Ibid.

⁷⁴⁹ Kaul and Mendoza, “Advancing the Concept,” 11.

⁷⁵⁰ Ibid.

⁷⁵¹ The Organisation for Economic Co-operation and Development (OECD), “Annex A. Game Theory and Collective Action.” In *Providing AgriEnvironmental Public Goods through Collective Action* (Paris: OECD Publishing, 2013), 19, accessed May 7, 2015, DOI: <http://dx.doi.org/10.1787/9789264197213-20-en>.

⁷⁵² Kaul and Mendoza, “Advancing the Concept,” 27. The analysis of environmental problems and policies goes beyond traditional welfare economic thinking. Indeed, the strict regulatory setting according to which there is a clear cut hierarchy between

where policy/governance pluralism is not the exception, but the rule, both the provision and the production of public goods are no longer exclusively national in scope. On the one hand, welfare economic theories dictate that the State has to intervene to correct market failures through a reasonable and efficient allocation of public goods. Such theories therefore suggest that public goods have to be provided centrally (that is, by the State/national government) in order to counteract the under-provision of public goods that takes place in the private market. Thus, the State is supposed to work out strategies to *internalise externalities* by levying, for example, Pigouvian taxes.⁷⁵³ The proposal of Weston and Bollier, which I would fully support, is to consider the commons-based model of ecological stewardship as an alternative strategy to internalise externalities and to forestall long-term sustainability problems.⁷⁵⁴

To sum up, environmental policy-making can promote economic efficiency and social peace to the extent that it starts taking into account the “non-marketability” of pure public goods. Social cost-benefit analysis has turned out to be largely useless in this context because environmental quality and sustainability are untradeable in markets; you cannot easily put a price on them.⁷⁵⁵ That is, pure public goods are

policy-makers (“the state/government rules”) and polluters (“citizens obey”) seems to be totally unviable. Hence, (liberal-)democratic states ought to build their strength on political legitimacy rather than on coercive power. On this point, see Endres, “Game Theory and Global Environmental Policy,” 125.

⁷⁵³ “Pigouvian taxes are taxes designed to correct for negative external effects. The idea is originally due to Pigou (1920), and has received increased attention in recent years because of the concern with environmental issues.” Agnar Sandmo, “Pigouvian taxes,” in *The New Palgrave Dictionary of Economics*, 2nd edn., eds. Steven N. Durlauf and Lawrence E. Blume (Basingstoke, UK: Palgrave MacMillan, 2008), accessed November 2, 2015, http://www.dictionaryofeconomics.com/article?id=pde2008_P000351, DOI: 10.1057/9780230226203.1289.

⁷⁵⁴ See Weston and Bollier, *Green Governance*, 191.

⁷⁵⁵ See, for example, Nathan W. Chan and Matthew J. Kotchen, “A generalized impure public good and linear characteristics model of green consumption,” *Resource and Energy Economics* 37 (August 2014): 1–16.

neither market failures nor mere State-produced goods. Of course, cross-border dimensions of public goods have changed the nature and scope of the whole debate. Global public goods, indeed, cannot be included in the classic category of public goods. Further, it is correct to say that international environmental policies require coordination among sovereign nations. However, this is a difficult task to achieve because agreements and enforcements among nations are often disregarded or, at worst, ignored. In addition, since transnational economic activities have increasingly assumed a global scale, the two defining features of public goods (“non-rivalry” and “non-excludability”) are becoming more and more obsolete. Climate change, in fact, is one of the most relevant cases of a global public good. Free-riding incentives are far stronger than they would be if dealing with national public goods since the number of people involved is larger (that is, the entire humanity). Another important challenge to be addressed in the next decades is the compelling need for international coordination when the provision of global public goods is at stake. Transboundary ecological problems (e.g., acid rain and carbon emissions, global diffusion of pathogens and diseases, etc.) are contentious for two main reasons: (1) the lack of a supranational agency that could take responsibility for global environmental action; (2) the non-compliance to environmental regulations due both to the asymmetry of information between “regulators” and “regulated” and to the absence of an authoritative international judicial system capable of guaranteeing compliance to international environmental agreements.

Game theory, including its recent applications to global environmental issues,⁷⁵⁶ may be of relevance only to the extent that

⁷⁵⁶ For a detailed review of the main game-theoretical approaches, see, for example, Julia Montero Touza and Charles Perrings, “The provision of international environmental public goods,” in *Ecosystem Services Economics (ESE) Working*

environmental policy is interpreted as the study of the complex strategic interactions between organised social interests in the global political arena, or as the outcome of decisions made by each individual government. State-based decision-makers are attentive both to the concessions made by other signatories and, most importantly, to the identity of these signatories in the general context of an international convention.⁷⁵⁷ Additionally, the most recent literature on this topic has focused both on the conditions that may affect the cooperative provision of emerging environmental public goods, and on the international institutions and treaties that have been or could be created to support global environmental cooperation.⁷⁵⁸ However, given that international coordination or cooperation is a necessary but insufficient condition for the efficient provision of transboundary environmental public goods, it is important to recall that many environmental public goods cannot be governed solely through international agreements. For the concerns of this thesis (see Chapter 6), active ‘eco-citizenship’ can make a difference, at least for local environmental public goods.

Paper Series 16 (Nairobi, Kenya: The United Nations Environment Programme – UNEP, 2011), 1–21.

⁷⁵⁷ Endres, “Game Theory and Global Environmental Policy,” 125–6.

⁷⁵⁸ Touza and Perrings argue, for example, that opportunities for cooperation among countries seem to be dependent on the socio-economic and biophysical contexts in which international public goods are provided. The strategic interactions occurring among countries are influenced by several other factors, such as the size of the group, the substitutability or complementarity of efforts to provide the public good, and so forth. See Touza and Perrings, “Provision of international environmental public goods,” 4.

Concluding remarks

As a way of summary, it should be stressed that present-day natural resources management systems require: (1) an adequate coordination of action across different political, institutional, and jurisdictional levels and actors (local-national-international-transnational); (2) a substantial re-consideration of *non-market/non-economic values* in political decision-making concerning commons assets. This also necessitates the provision of appropriate, context-sensitive governance and formal institutional models for commons management.⁷⁵⁹ What is really at stake here, however, is the human responsibility to reconcile technological progress with moral personal reflection and public concern.⁷⁶⁰ In this respect, the thoughts of the Finnish philosopher Georg Henrik von Wright (1916–2003) are of relevance.⁷⁶¹ In brief, according to von Wright, the uncritical acceptance of unlimited (and unconstrained) economic growth and the scientific faith in the “technological fix of all kind of problems, including existential and moral problems,” have resulted in “a lack of balance between economic and ecological development”.⁷⁶² Yet, as eloquently stated by the German economist Joachim H. Spangenberg, a significant change in perspective “will only be possible if the prevailing neoclassical worldview is replaced by one recognizing that the laws of nature, and the limits they imply, apply to economic processes as much as to the environment”.⁷⁶³ He suggests that it is necessary to espouse the “strong” sustainability view endorsed by most contemporary ecological economists. In his view, this is a necessary condition to halt the

⁷⁵⁹ On this point, see Thorseth, “Limitations to governance of natural resources,” 39.

⁷⁶⁰ For background on this issue, see Thorseth, “Limitations to governance of natural resources,” 38.

⁷⁶¹ Summarised by May Thorseth in *ibid.*

⁷⁶² *Ibid.*

⁷⁶³ Spangenberg, “Ideology and Practice of the ‘Green Economy’,” 146.

“commodification of nature” and to ensure global human and ecological health. In addition, he contends that “sustainable objectives” in international relations must include peaceful conflict resolution, disarmament, and a ban on nuclear testing, weapons exports and military invasions/occupations. He actually believes that the adoption of these political strategies may reduce global environmental depletion and degradation for the benefit of all affected people, especially the more vulnerable and poorer people that live in the Global South.⁷⁶⁴

Moreover, it has to be borne in mind that the current financial crises and their economic side-effects have progressively reduced the democratic bargaining power that is challenged by regulatory networks and institutions at the national, regional, and supranational levels. National legal systems have to adapt to a fast-changing globalised world where people are connected horizontally thanks to the magnetic and centripetal power of social and cultural networks. Democratic-participatory strategies applied either to State or market domains put all “commons” at the core of a new empowerment process. Individual and social groups do have the full right to claim recognition of the inalienable essence of “commons” as part of a juridical system in which public interest is predominant and the functional aspects of public goods can shape both ecological and human development. Since the coupling of corporatisation/privatisation and the “enclosure of the commons” revival are probably doomed to failure and unproductiveness,⁷⁶⁵ it now remains for citizens to activate a constituent process whose protagonists are, for example, civil society organisations, (eco-)communities, environmental and labour movements, and so forth.

⁷⁶⁴ Spangenberg, “Ideology and Practice of the ‘Green Economy’,” 147.

⁷⁶⁵ See Harvey, *The New Imperialism*, 14.

What this suggests is that current environmental policies ought to be designed and implemented keeping in mind the need to halt the expropriation of our “common goods”, especially in the most socio-environmentally vulnerable areas of the globe. Environmental policy- and decision-makers are therefore asked to reconsider the benefits of global environmental protection and conservation and to suggest concrete management strategies involving common assets; in addition, these environmental policies and strategies ought to recognise and support the constituent function exercised by civil society in the public domain. On this point, Stewart states that “to truly avoid the tragedy of the commons, we must build the institutions, norms and social relations capable of integrating ecological criteria and concerns into all aspects of collective and private decision-making. This, in turn, can only be achieved through a ‘re-embedding’ of market relations within the public domain”.⁷⁶⁶ The aim of the next Chapter is to elucidate how the commons dilemmas described in Chapter 3 arose in the history of the Arab and Islamic world. Basically, in Chapter 4 it is argued that the Islamic civilisation has responded to these dilemmas in two fundamental ways: (1) by acquiring previous traditional/indigenous knowledge as regards the access, use and management of communal (shared) resources; (2) by elaborating eminently Islamic ecological concepts, institutional, legal-juridical tools, and management systems. This response, which is based on social solidarity and ecological respect, seems to be partially consistent with the positions of ecological economics, as presented in Chapter 3.

⁷⁶⁶ Stewart, “Avoiding the Tragedy of the Commons,” 203.

4. The “Islamic commons”

As explained in the Introduction to this Section, there is, in Islam as in other world religions, a deep-rooted ethical-moral tradition concerning how to deal with economic/financial matters, as well as how to administer communal (shared) resources. In the context of current theories regarding the management of commons, we will now discuss the specific viewpoints of Islam. To do so, we will first discuss the notion of Islamic economics and its views on private and public property which, as we will see, provides a natural point of entry into a discussion of Islamic ecology.

The Islamic scriptural sources (i.e., the canonical texts, the Quran and the Sunnah) are filled with economic terms and metaphors taken from commerce and trade.⁷⁶⁷ Words like *debt*, *payment*, *reward*, *contract*, *deal* and the like pervade not only Islamic classical sources, but also Islamic jurisprudence and law. More specifically, the available *fiqh* literature focuses on Shariah-based rules and regulations for correct Islamic behaviour in society and in economic activities. The study of Islamic economic thought for example (as examined by the late twentieth-century economic doctrine commonly known as “Islamic economics”),⁷⁶⁸ has shed light on the Shariah-based principles, theories and methods that historically served as the basis for developing Islamic

⁷⁶⁷ According to the Quranic text, believing in God is the result of a contract (‘*aqd*) signed before God (see, e.g., Qur’an, 35:29). On this point, see also Hartman, “Economics,” 149.

⁷⁶⁸ For a review of the literature on Islamic economics, see, for example, Munawar Iqbal, *Islamic Economic Institutions and the Elimination of Poverty* (Leicester, UK: The Islamic Foundation, 2002); and idem, *Islamic Perspectives on Sustainable Development* (Houndmills: Palgrave Macmillan, 2005); Ahmed Elashker and Rodney Wilson, *Islamic Economics: A Short History* (Leiden-Boston: Brill, 2006); Ersilia Francesca, *Economia, religione e morale nell’islam* (Carocci, Roma, 2013); Taha Eğri and Necmettin Kızılkaya, eds., *Islamic Economics: Basic Concepts, New Thinking and Future Directions* (Cambridge Scholars Publishing, 2015); Hossein Askari, Zamir Iqbal, and Abbas Mirakhor, *Introduction to Islamic Economics: Theory and Application* (Singapore: John Wiley & Sons, 2015).

contract law principles, as well as economic/financial governance systems, institutions, and policies.⁷⁶⁹

Put simply, in Islam, God's generosity toward His beloved creatures is regarded as a gift and a source of permanent blessing that reflects the purposes of God's *oikos*. In the words of Laura M. Hartman, "[...] God engages in a divine version of a 'gift economy': regardless of human 'ability to pay,' God bestows generous gifts on believers, giving to all with divine generosity",⁷⁷⁰ quoting the Qur'an, 35:29, which recites:

Those who rehearse the Book Of Allah, establish regular Prayer, and spend [in Charity] out of what We have provided For them, secretly and openly, Hope for a Commerce That will never fail.⁷⁷¹

As explained by Nawal H. Ammar, "Islamic economics"⁷⁷² is a value-laden socio-economic system that "has been set forth as a "third way" that has to be distinguished from both "*laissez-faire* capitalism" and from "Marxist socialism".⁷⁷³ She further states that "the system,

⁷⁶⁹ See, for example, Saeed, "Economics," 5 ff.

⁷⁷⁰ Hartman, "Economics," 149, note 1.

⁷⁷¹ Qur'an, 35:29.

⁷⁷² The term "Islamic economics" is usually referred to as an economic theory based on Islamic principles and precepts. It was first elaborated in the 1940s-1950s by Muslim scholars, economic thinkers and jurists. The Pakistani Sayyid Abu Ala al-Mawdudi (d. 1979), the Egyptian ideologue Sayyid Qutb (d. 1966) and the Shia cleric and political leader Muhammad Baqir al-Sadr (d. 1980) were among its main proponents. See Abū 'l-A' lā Mawdūdī, *The Economic Problem of Man and its Islamic Solution*, 5th edn. (Lahore, Pakistan: Islamic Publications, 1978); Sayyid Qutb, *Social Justice in Islam*, transl. J.D. Hardie (New York: American Council of Learned Societies, 1970 [1948]); Muhammad Baqir al-Sadr, *Iqtisādunā* ("Our Economics") (Bayrūt: Dār al-Ta'āraf li'l-Maṭbu'āt, 1982). For a constructive introduction to Islamic economics, see, for example, Masudul Alam Choudhury, "Islamic Economics as a Social Science," *International Journal of Social Economics* 17, no. 6 (1990): 35–59; Umar Chapra, "Is it necessary to have Islamic economics?" *Journal of Socio-Economics* 29 (2000): 21–37, accessed March 7, 2015, http://ues.ac.ir/files/takmili/islamic_econ/islamic_is_it.pdf; Karen Pfeifer, "Is There an Islamic Economics?" in *Political Islam: Essays from Middle East Report*, eds. Joel Beinin and Joe Stork (London-NY: I.B. Tauris & co Ltd., 1997), 144 ff.; Syed Nawab Haider Naqvi, *Ethics and Economics: An Islamic Synthesis* (Leicester, UK: U.K.: Islamic Foundation, 1981).

⁷⁷³ Ammar, "An Islamic Response to the Manifest Ecological Crisis," 378.

ideally, creates a society of private ownership and enterprise without the vast accumulation and concentration of wealth”.⁷⁷⁴ For instance, the Quranic prohibition of usury, in Arabic *ribā* (“excess advantage” or “unjust enrichment”) in the context of commercial activities⁷⁷⁵ and the Islamic ban on uncertainty, risk, and speculation in commercial-financial transactions (*gharār*) are exemplary cases of the Islamic economic way of thinking. Further, the punishments for illegal acts such as the misappropriation of goods and property belonging to others and the moral vilification of cheating, fraud, and gambling (*maysīr*) are fully consistent with Islamic limits to growth (*takāthur*) and with the general restrictions on wealth accumulation/hoarding (*jam‘ māl*) in human economic/financial exchanges.⁷⁷⁶

As opposed to, for instance, Christianity, Islam considers human wealth both a blessing and a trust from God; thus, it accepts personal income and wealth gaps among people, but only to the extent that these inequalities result from differences in the type of contribution made by single individuals to collective goals (e.g., national economic growth and development). The justice-orientation of the Islamic economic and social doctrine justifies its condemnation of excessive attachment to

⁷⁷⁴ Ibid.

⁷⁷⁵ Qur’an, 30:39 recites (transl. Yusuf Ali): “That which ye lay out for increase through the property of [other] people, will have no increase with Allah: but that which ye lay out for charity, seeking the Countenance of Allah, [will increase]: it is these who will get a recompense multiplied”. Another Qur’anic verse (3:130) states: “O ye who believe! Devour not usury, doubled and multiplied; but fear Allah; that ye may [really] prosper” (transl. Yusuf Ali). Similarly, Qur’an, 2:275 explicitly says: “Those who devour usury will not stand except as stand one whom the Evil one by his touch hath driven to madness. That is because they say: ‘Trade is like usury,’ but Allah hath permitted trade and forbidden usury. Those who after receiving direction from their Lord, desist, shall be pardoned for the past; their case is for Allah [to judge]; but those who repeat [The offence] are companions of the Fire: They will abide therein [forever].” See also Qur’an 4:161. On the Islamic concept of *ribā*, see, for example, Muhammad Akram Khan, *Riba in Contemporary Literature* (Lahore, Pakistan: Islamic Publications, 1983); Ahmad Mushtaq, *Business Ethics in Islam* (Islamabad: The International Institute of Islamic Thought, 1995).

⁷⁷⁶ Cf. Qur’an, 9:34–5.

money or material possessions and, most importantly, its opposition to the greedy, self-interested, opportunistic, and exploitative behaviours assumed by both individual and collective actors when engaged in commercial, economic/financial, or social interactions. Islam emboldens its followers: (1) to share personal wealth by giving money to charity; (2) to be benevolent toward humankind, and especially toward Muslim fellow-believers (*fellowship*). This distinctive moral orientation is chiefly intended to promote social cohesion within the Muslim community. Besides that, the Islamic tradition seeks to instil a concrete sense of solidarity toward poor people (special attention is indeed given to the orphans, the widows, the poorest, the most disadvantaged, and the least capable citizens of society),⁷⁷⁷ as well as toward broader society. In brief, Islam, due to its distinctive moral-ethical commitment to avoid the concentration of wealth in the hands of a few, seems to encourage the pursuit of socio-economic fairness, equity, and justice.

Consequently, Islam prescribes wealth and property redistribution in the forms of almsgiving and charity, such as voluntary charity (*ṣadaqah*), the payment of *zakāt* (“obligatory almsgiving”),⁷⁷⁸ and endowments for public use (*awqāf*, sing. *waqf*).⁷⁷⁹ In addition, Islam gives special importance to lawful work or labour (*‘amal*, “work” or *kasb*, “earned acquisition”). Work activities not only satisfy the human need for physical and material sustenance and the subsequent desire for well-being, but they also respond to the quest for human dignity, self-

⁷⁷⁷ Cf. Qur’an, 2:271; 9:60; and 22:28.

⁷⁷⁸ *Zakāt* is one the Five Pillars of Islam, i.e., a charity obligation that eventually led to the imposition of a tax on personal wealth and to the establishment of a modern taxation regime in some Muslim-majority countries; ethically speaking, however, it is an essential part of the “cleansing process for both wealth and the individual”. See Izzi Dien, *The Environmental Dimensions of Islam*, 17.

⁷⁷⁹ Cf. Qur’an, 2:254 and 261 (social solidarity); Qur’an, 9:60 and 103 (*zakāt*); Qur’an, 2: 219 and 5:90-1 (*maysīr*).

sufficiency, autonomy and independence.⁷⁸⁰ Thus, Islamic work ethics derived from traditional theological sources considers hard work — and the wealth resulting from tangible human efforts and meaningful contributions — as an important act of divine worship, that is, as an act of responsibility for the sake of the entire Muslim community/society.⁷⁸¹

It is therefore not surprising that the Islamic traditional conception of public and private property has important economic and social implications for contemporary Muslim-majority societies. McAuliffe says in this respect:

[...] private ownership is seen as a right which is to be protected (q 2:188 [...]). In turn, the community is allowed certain rights over the wealth of the individual: Unlimited private property would destroy the social obligations which go together with the possession of wealth, and balancing the interests, rights and obligations of the individual with the needs of the community is one of the key features of the Qur'anic economic outlook.⁷⁸²

Clearly, these various economic values of Islam are of great relevance to considerations of an ecological nature. Consequently, the Islamic legal-economic theories, methods, instruments and institutions of the ancient past (e.g., *waqf*, *ḥimá* and *ḥarām*, see par. 4.1), as well as Islamic (and even pre-Islamic) 'eco-friendly' socio-economic customs and practices have all been sources of inspiration for contemporary eco-

⁷⁸⁰ See Saeed, "Economics," 6.

⁷⁸¹ See Ahmad Shukri and Musa Yusuf Owoyemi, "The Concept of Islamic Work Ethic: An Analysis of Some Salient Points in the Prophetic Tradition," *International Journal of Business and Social Science* 3, no. 20 (Special Issue October 2012): 117, accessed May 12, 2015, http://ijbssnet.com/journals/Vol_3_No_20_Special_Issue_October_2012/12.pdf.

Also worthy of note is the German philosopher jurist, sociologist, and political economist Max Weber (1864–1920), who in his work *The Protestant Ethic and the Spirit of Capitalism* (1904–1905; republished in 1920) found a correlation between Christian Protestant ethics (and specifically North European Calvinism and its attitude to work) and the rise and growth of modern capitalism in sixteenth-century Western Europe. See Max Weber, *Die protestantische Ethik und der 'Geist' des Kapitalismus* (Tubinga: *Archiv für Sozialwissenschaft und Sozialpolitik* XX –XXI, 1904-1905). Translated by Talcott Parsons as *The Protestant Ethic and The Spirit of Capitalism* (New York: Charles Scribner & Sons, 1958).

⁷⁸² Saeed, "Economics," 6.

ethical thinkers. Some of these argue for a re-assessment, re-actualisation and re-experiencing in current times, while others find that such reformist efforts can meet with success only by adopting a true spirit of innovation. This is the preferred way, it seems to me, to transform the Islamic tradition into a new doctrinal paradigm grounded in the past but moving toward the future. Thus, with an eye to the environmental and sustainability problems of our planet — which of course have to be observed and analysed within their historical and locally-specific contexts — it seems relevant to examine some Islamic systems for the protection of communal resources. Contemporary natural resources management systems might benefit from the selective re-appropriation and the accurate reapplication of some Islamic moral and legal standpoints as regards, for example, property rights and the rights to access, use, and manage natural resources (e.g., land, soil, water, etc.). Nowadays, however, the governments of several Muslim-majority countries, due to their oil and gas-based economies, continue to heavily rely on fossil fuels (chiefly petroleum).⁷⁸³ Although some of these countries have recently opted for economic diversification, they seem to be at best insensitive and at worst reluctant to embrace environmental politics and policy-making. This is to say that these countries' efforts in the environmental field are timidly implemented and ineffective, especially at a local scale. Locally, some citizens still struggle against ecological damage and dire poverty. To conclude, in the following paragraphs I will provide a cursory overview of the Islamic scholarly literature on Islamic land and water rights (including traditional systems for land and water preservation and protection from

⁷⁸³ As noted by Härmälä while commenting on a World Bank Report (2014), six among the countries top ten GHG emitters in 2010 were Muslim countries (Qatar, Kuwait, Brunei, Oman, UAE, and Bahrain. See Inga Viola Härmälä, “Transformative Islamic Ecology – Beliefs and Practices of Muslims for Sustainable Agriculture and Permaculture” (MA Thesis, Lund University, 2014), 8.

misuse and pollution), biodiversity and wildlife management systems, reduction of pollution and waste management systems. Unlike that illustrated in Chapter 2, this extensive literature provides a theoretical basis that might help us understand how to deal with commons-management problems in predominantly Muslim contexts. Of course, as you will subsequently see in Chapter 4, there are examples of community-based natural resources management and conservation systems in contemporary Muslim-majority countries, but this is an emerging field of inquiry. Indeed, more work has still to be done by States, State-based institutions, and non-governmental organisations in order to selectively reform and reshape the traditional (and Islamic) resource management systems so that they can be useful for the livelihood struggles of contemporary Muslim “commoners”, and especially for those local communities who want to actively participate in the protection, conservation, and nurture of their own natural resources.

4.1. Commons management systems in Islam

The Islamic eco-ethical schemas extensively presented in Chapter 2 have been stretched and expanded by contemporary Muslim, as well as non-Muslim eco-thinkers. As stated elsewhere, since the late twentieth century, a group of Islamic eco-scholars has attempted: (1) to study whether Islam attaches moral value to the non-human world (e.g., lands, waters, plants, animals); (2) to elaborate an Islamic response to present-day environmental emergencies. These scholars have also investigated how and to what extent the Islamic conception of human/nature relationships has been able to inform contemporary Islamic environmental law. In this context, a critical review of the Islamic legal-juristic tradition pertaining to environmental law and governance may thus provide us with some useful insights into the

Shariah-based norms, legal-institutional systems, and customary practices and techniques still at hand in the Islamic world. While describing Islamic legal views of the environmental issues of our time, the Islamic legal scholar Yasin Dutton plainly states that:

From an Islamic legal standpoint, the question on how to use the environment is ultimately one of rights to, and uses of, natural resources. It is therefore primarily an economic issue, although, as noted above, there is an implicit ethical stance behind it.⁷⁸⁴

Similarly, the Muslim eco-activist Fazlun Khalid argues that the systematic reinterpretation of a range of Shariah-based sources has led him to the formulation of three general principles, which, in his view, express the Islamic perspective on natural resources management and sustainability:

[...] (1) “the elements that compose the natural world are common property”; (2) “the right to benefit from natural resources is a right held in common”; and (3) “there shall be no damage or infliction of damage bearing in mind future users”.

Khalid further explains that contemporary Islamic legal scholars have recovered two traditional institutions for the conservation and protection of communal (shared) resources: *ḥimá* (“reserves” or “protected, forbidden place”) and *ḥarīm* (“inviolable zones”).

The *ḥimá* (hima) is a widespread 14,000 year-old institution for nature conservation.⁷⁸⁵ This native system, which was first developed in the pre-Islamic Arabian Peninsula, permits the creation of: (a) reserves or multiple-use areas, i.e., conservation zones aimed at protecting either land (e.g., woodlands, grasslands and wetlands) or endangered species

⁷⁸⁴ Dutton, “Islam and The Environment,” 58.

⁷⁸⁵ In more practical terms, Odeh Al-Jayyousi, former Regional Director of the IUCN Regional Office for West Asia (ROWA), has recently remarked that, in current times, the *ḥimá* system “can be sustained and resourced by community-based financing models such as *waqf* (trust funds)”. See Odeh Al-Jayyousi, “Hima as a model for natural resource management in West Asia and North Africa,” *IUCN*, August 11, 2010, accessed May 7, 2015, <https://www.iucn.org/node/6593>.

of flora and fauna; (b) collectively co-managed Common-Pool Resources (CPRs) led either by the State, or by a civil society organisation, or by the local community itself.⁷⁸⁶ In the pre-Islamic era, groups of tribal chieftains and landowners established himas as a peppering of safe places for their own flocks. Prior to Islam, a chieftain could get exclusive use of land as far as the sound of his dog could be heard from a given point.⁷⁸⁷ In a semi-arid and inhospitable region like Arabia, himas were set aside (*matrūk*) as untouched areas where grazing animals and their watering rights were somehow safeguarded and where public access was therefore strictly forbidden (“to anyone but the owner(s)”).⁷⁸⁸ Indeed, hima can be defined as “the title given to the land reserved by the landlord for grazing purposes”.⁷⁸⁹ Consequently, himas were originally conceived as reserved (sometimes seasonal) pastures and set-aside lands used for regeneration purposes. That long-standing indigenous conservation model was then used to identify specific enclosed zones where grazing activities, the felling of trees and grasses, hunting wildlife, etc. were prohibited or, at least, heavily restricted.⁷⁹⁰ Later on, the pre-Islamic nomadic institution known as hima was in part assimilated into the dominant Islamic culture, but in the process it

⁷⁸⁶ See Islamic Relief Worldwide (IRW), *Climate Change Policy*, 15.

⁷⁸⁷ See Othman Abd-ar-Rahman Llewellyn, “The Basis for a Discipline of Islamic Environmental Law,” in *Islam and Ecology: A Bestowed Trust*, eds. Richard C. Foltz, Frederick M. Denny and Azizan Baharuddin (Cambridge: Harvard University Press, 2003), 185–247.

⁷⁸⁸ Peter Vincent, “Environmental Protection, Regulation and Policy,” in *Saudi Arabia: An Environmental Overview* (London-New York: Taylor & Francis, 2008), 251.

⁷⁸⁹ *Ibid.*

⁷⁹⁰ As explained by Izzī Dien, the literal meaning of *himá* is “guarded”/“forbidden” place. See Izzī Dien, *The Environmental Dimensions of Islam*, 42. For a detailed account of the historical evolution of the hima conservation system, see also Lutfallah Gari, “A History of the Hima Conservation System,” *Environment and History* 12, no. 2 (May 2006): 213–28, accessed June 7, 2015, http://www.environmentandsociety.org/sites/default/files/key_docs/gari-12-2.pdf.

obviously lost its tribal and pagan-secular traits.⁷⁹¹ Overall, the adoption and implementation of the hima system in the Islamic context was often defended on the basis of the claim that its main goal was the protection of the public or collective interest (*maṣlaḥa*), which had to prevail over individual interests.⁷⁹² Hence, under certain conditions, those protected areas (e.g., grazing lands, forests, etc.) had to be shared by (and accessible to) all members of the Muslim community, especially by the poorest and their grazing cattle.⁷⁹³ By setting limits on individual claims on shared resources in order to promote public welfare and social justice, the hima system actually opposes the narrow individualistic view of property rights, which is mainly rooted in Western capitalistic societies (cf. Chapter 3). Most importantly, it has to be noted that the hima system forbade people to: (1) build on areas protected by hima; (2) use those protected lands as trade commodities; (3) cultivate those areas for financial gain.⁷⁹⁴ This seems to demonstrate that the commodification and privatisation of hima lands were prohibited and, above all, that the hima lands could not be a source of economic and business profit (Cf., e.g., par. 3.1 and 3.5). In sum, the principles of hima seem to show that Middle Eastern societies had their own traditional indigenous system for sustainable resource conservation and biodiversity protection. This system, which was based on tribe-centred sustainable co-management and self-government of local communal resources, was for centuries considered as ecologically and socially

⁷⁹¹ Commenting on this point, for example, Mawil Izzi Dien explains that, according to some Medieval Islamic theologians-jurists, the Prophet Muhammad and the early caliphs actually favoured the application of the hima principle. Izzi Dien, *The Environmental Dimensions of Islam*, 43. The hima system flourished throughout the Middle Ages and survived until the first half of the twentieth century. See Gari, "A History of the Hima," 218.

⁷⁹² In distributive justice terms, the interests of the worst-offs are prioritised over those of the well-offs.

⁷⁹³ See Izzi Dien, "Islamic Environmental Ethics," 171 ff.

⁷⁹⁴ See Gari, "A History of the Hima," 214.

sustainable. Since the rules and regulations of tribal land use were in line with local ecological knowledge and were subjected to social control by community members, bio-cultural diversity was somehow protected both from centralised political control and from ecological harm.⁷⁹⁵ Thus, the fact of it being built on consensus rather than on top-down legislation still makes this vernacular (i.e., native-born) system a valid alternative to modern national park strategies for nature conservation and protection. It is noteworthy that even today the hima system is one of the instruments for biodiversity and wildlife conservation in countries such as Saudi Arabia (wildlife/desert oasis protection), Lebanon (national network of himas), Zanzibar (Misali Island/marine fisheries conservation), Morocco (High Atlas - Yagour Plateau/pasture conservation), and in other Arab countries (Jordan, Syria, Yemen, Bahrain, Qatar and other Gulf Arab states).⁷⁹⁶

Furthermore, in ancient times the Arab tribes and clans put those sacred sites (himas) “under the protection of tribal deities”,⁷⁹⁷ so that they became important natural sanctuaries. In the early Islamic period, indeed, the hima system was (and is still) applied to the two sacred cities (*al-ḥaramayn*, “the two Sanctuaries”) of Mecca (*Makkah*) and Medina (*al-Madīnah*, formerly *Yathrib*) (see Qur’an, 5:2). Such *ḥaram* is, indeed, a sacred area, i.e., an “inviolable sanctuary” interdicted to human use (planting and injuring wild animals are forbidden acts). It represents one of the oldest Islamic institutions, tracing back to the early Islamic period and, more specifically, to the time of the Prophet Muhammad (seventh century AD). The application of this traditional

⁷⁹⁵ For more on this, see Gari, “A History of the Hima,” 219–26.

⁷⁹⁶ Ibid. See also Islamic Relief Worldwide (IRW), *Climate Change Policy*, 15. For a general overview on the diffusion of the hima system across Arab-Islamic countries, see, for example, Tom Verde, “A Tradition of Conservation,” *Aramco World* 59, no. 6 (November-December 2008), accessed December 7, 2015, <http://archive.aramcoworld.com/issue/200806/a.tradition.of.conservation.htm>.

⁷⁹⁷ Izzī Dien, *The Environmental Dimensions of Islam*, 43.

customary system led to the establishment of *ḥarīm*, i.e., inviolable zones around sacred (religious) sites, common wells, natural springs, riverbanks, underground water channels and the like. These communal (shared) lands are accessible to local settlers, who can use them to obtain forage and firewood, i.e., to sustain themselves and their communities. The current disappearance of these communal lands through enclosures and privatisation has actually impoverished present-day Muslim societies, as anticipated in Chapter 3.

Islam has also benefited from a culture of charitable endowments (*awqāf*). When a private owner donates lands and buildings, or allocates financial assets and the like for charitable public objectives, the transferred assets become eternal trust assets /funds. For instance, even today, himas (e.g., wildlife reserves, public gardens or wells) can be secured and protected in a more permanent and sustainable setting because a waqf (*waqf*) may take, for example, the form of a fund or endowment for the financing of nature conservation projects. There are several examples of this phenomenon. In the Middle East, for example, the international NGO BirdLife International has recently promoted a regional project for re-enforcing and/or reviving himas. The Hima Fund was launched in 2011 thanks to the partnership of some Arab-Muslim countries (Jordan, Lebanon, Qatar and Oman), which agreed to restore the hima system to four sites.⁷⁹⁸

⁷⁹⁸ BirdLife International Middle East, “Hima traditional land designation,” BirdLife International, accessed October 6, 2016, <http://www.birdlife.org/middle-east/projects/hima-traditional-land-designation>. For more information on the hima-based governance of rangelands in Jordan, see, for example, Fidaa F. Haddad, “Rangeland resource governance – Jordan,” in *The Governance of Rangelands: Collective Action for Sustainable Pastoralism*, eds. Pedro M. Herrera, Jonathan Davies, and Pablo Manzano Baena (London: Earthscan-Routledge, 2014), 57–60.

4.2. Islamic land ownership and management systems

In the Islamic legal-judicial texts, as explained by Yasin Dutton,⁷⁹⁹ lands are generally divided into two main categories: *al-‘āmir* (literally, “inhabited or cultivated land” or “land which is either used, owned, or annexed to ‘amir’s land”) and *al-mawāt* (literally, “dead land”, i.e., an “undeveloped, unused and communal/unowned land”, which “is not annexed to ‘āmir’s land”). The first category includes “settlements” and “agricultural lands”, while the second may be roughly subdivided into “grazing lands” and “virgin wilderness” (*terra nullius*).⁸⁰⁰ These four sub-categories, according to Dutton’s explanation, indicate, respectively, trade, agriculture, pastoralism and the absence of any sort of human activity. With regard to the *mawāt* (*mawāt*) land, it is important to observe that the “reclamation/rehabilitation of dead/barren lands” (*iḥya’ al-mawāt*) for agricultural purposes is used in the Islamic legal literature to connote the ecological practice of “bringing the land to life [...] by putting a piece of land to use”.⁸⁰¹ According to classical Islamic jurists, any effort aimed at reviving the soil (“by ploughing, or building water channels, or digging a canal leading to it”)⁸⁰² is wise because it preserves and enhances soil fertility, which is a necessary condition for ecological health and human survival.⁸⁰³

Furthermore, the individual right to re-claim and subsequently acquire private ownership of neglected lands (e.g., dry and flooded lands that are not owned by anybody) is mainly based upon the tradition

⁷⁹⁹ See Dutton, “Islam and the Environment,” 59. See also Deuraseh, “Earth in the Holy Qur’an,” cit.

⁸⁰⁰ Ibid.

⁸⁰¹ See Deuraseh, “Earth in the Holy Qur’an,” 84.

⁸⁰² Ibid.

⁸⁰³ See Deuraseh, “Earth in the Holy Qur’an,” 83 ff. See also Izzi Dien, *The Environmental Dimensions of Islam*, 37–42.

of the Prophet and his Successors.⁸⁰⁴ The person (*iḥya'*, *cultivator*) who brings “dead lands” back to life becomes its legitimate owner (with or without the permission of the *imām*/state, according to the Shi‘i school of law),⁸⁰⁵ provided that the cultivation of empty lands and/or the construction of human settlements on such lands will neither harm (or infringe the right of) others, nor jeopardise the welfare of the wider Muslim community. However, the Hanafis and later jurists counter-argued that Prophetic traditions prescribe that the acquisition of property rights on mawat lands should be dependent on the *imām*’s (or, alternatively, on the ruler’s/the state’s) approval. The Maliki school, as noted by Neuraseh, “considers the state’s consent only necessary where a mawat land is situated close to any human settlement” (village or town).⁸⁰⁶ According to the Hanbali school, the consent of the State is needed only if the land has been previously owned by a Muslim or *dhimmī* (“protected person”).⁸⁰⁷ That is, if a privately owned piece of land is left idle by its owner, the State authority (at the end of the prescribed period of three years conceded to the owner to rehabilitate

⁸⁰⁴ Cf. Al-Bukhārī: 2335. The Shafi‘i scholars held that some Prophetic teachings encourage and authorise the revival of dead lands. For more information on the acquisition of ownership through *iḥya' al-mawāt*, see Siti Mariam Malinumbay S. Salasal, “The Concept of Land Ownership: Islamic Perspective,” *Buletin Geoinformasi* 2, no. 2 (December 1998): 297–300; M. Saleem Bukhari, “Squatting and the Use of Islamic Law,” *Habitat International* 6 (1982): 555; as cited in Siraj Sait and Hilary Lim, “Islamic Land Tenures and Reform,” in *Land, Law and Islam: Property and Human Rights in the Muslim World*, vol. 1 (London-NY: Zed Books, 2006), 61. See also Deuraseh, “Earth in the Holy Qur’an,” 85.

⁸⁰⁵ The Shafi‘i school of law is one of the four major school in Sunni Islamic jurisprudence.

⁸⁰⁶ See Deuraseh, “Earth in the Holy Qur’an,” 85. See also Salasal, “The Concept of Land Ownership,” 299.

⁸⁰⁷ *Dhimmī* (literally, “protected persons”) was the term used to refer to the non-Muslim minorities who historically had to pay a poll tax (*jizyah*) to Muslims in order to enjoy special protection status and peacefully reside in the Islamic polity. See Anver M. Emon, “Religious Minorities and Islamic Law: Accommodation and the Limits of Tolerance,” in *Islamic law and international human rights law: searching for common ground?*, eds. Mark S. Ellis, Anver M. Emon and Benjamin Glahn (Oxford: Oxford University Press, 2012), 323–43.

it) has the right to designate that land to any other tiller/cultivator who is able to revive it.⁸⁰⁸

With regard to the acquisition of land ownership under Islamic law, it is worth considering the case of *iqṭaʿ* (“land grant”), i.e., the allocation of lands granted by the government/State authority to a developer who is asked to render them productive both for himself and for the entire community.⁸⁰⁹ Looking at Islamic economic history, the *iqṭaʿ* system was extensively utilised for land management. Indeed, *iqṭaʿ* (*iqṭaʿ*) was a type of grant given to certain Muslims (cultivators, tillers, soldiers, etc.) for the benefit and at the service of the local community. Muslim jurists, however, disagreed on the specific rules governing the *iqṭaʿ* to be applied to lands acquired through *iḥyaʿ al-mawāt*. Salasal (1998) carefully explains that the Maliki jurists maintained that the state authority is entitled to concede full rights of ownership (*iqṭaʿ tamlīk*) to the grantee who is capable of rehabilitating mawat lands, whereas the Shafiʿi school supports the doctrine of conditional ownership. According to Shafiʿites, the formal concession of full private ownership is granted only to the extent that the completion of the *iḥyaʿ al-mawāt* process entrusted to the grantee does not exceed a period of three years. The Hanafi school say that the grantee has a qualified right to ownership. As Salasal (1998) tells us, the right of full ownership:

⁸⁰⁸ For more information on the Ottoman classification of *mawāt* lands, see Noa Kram, “The Naqab Bedouins: Legal struggles for land ownership rights in Israel,” in *Indigenous (In)Justice: Law and Human Rights for Bedouin Arabs in the Naqab*, eds. Amara Ahmed, Ismael Abu-Saad, and Oren Yiftachel (Cambridge: The Human Rights Program, Harvard Law School, Harvard University Press, 2012), 99–124. See also Salasal, “The Concept of Land Ownership,” 299.

⁸⁰⁹ *Ijāra* (“land leased by the state to cultivators”) is also included in the ‘undeveloped land’ category. In Islamic law, the principle of *al-ijāra* (“leasing”) was mainly applied to land contracts. On this point, see Arthur Saniotis, “Nature as an expression of Tawhid (Divine Unity),” in *Biodiversity and Ecology as Interdisciplinary Challenge*, eds. Denis Edwards and Mark Worthing (Australian Theological Forum Press, 2004), 105.

could diminish and be extinguished or lost should the grantee fail to cultivate the land within the time element stipulated therein. Should any conflict of interest arise between the iqta' grantee and ihya cultivator, this would be resolved in favor of the latter. The ihya cultivator has priority in his claim over the iqta' grantee whose interest has been forfeited due to his failure to rehabilitate the land in question.⁸¹⁰

Traditionally, land ownership can also be based on *tahjīr* (“delimitation of land”), i.e., a preliminary measure performed by the cultivator who is willing to reclaim barren lands, such as arranging stones, thorns, dead branches round a plot, or digging a well, clearing the glass, and the like.⁸¹¹ According to the Shafi'i school, for example, performing *tahjīr* does not automatically guarantee rights of land ownership, which is therefore conditional to the prescribed three-year deadline. As stated by Salasal, the Hanafi school considers *tahjīr* “a notice to parties” in case of controversies concerning land ownership rights. In addition, the person who marks land boundaries actually enjoys the prior right to carry out land cultivation.⁸¹²

This very brief overview of Islamic land ownership and management systems is relevant here for many reasons. On the one hand, it is related to previous discussions on ecological health and development. The revival of dead lands seems to be consistent with modern developmental approaches with regard to sustainable land use and management. On the other hand, it has to be said that in the colonial and post-colonial Arab (and Islamic) world, native communities (especially indigenous tribal people) have been dispossessed of their lands in application of the doctrine of *terra nullius* to mawat lands. Regrettably, these historical injustices have yet to be addressed (cf. Chapter 3).

⁸¹⁰ Salasal, “The Concept of Land Ownership,” 300.

⁸¹¹ See Ann S. K. Lambton, *Landlord and Peasant in Persia: A Study of Land Tenure and Land Revenue Administration* (London-New York: I.B. Tauris & Co. Ltd., 1991), 205.

⁸¹² Salasal, “The Concept of Land Ownership,” 301–2.

4.3. Islamic water conservation and management systems

Water scarcity and its deteriorating quality in Muslim states is a major topic of international discussion. However, more progress should be made in Muslim-majority countries to enact legislation on water resources conservation and management. Islamic ecological wisdom, as earlier stressed, is based on long-standing, customary-traditional norms and methods for water conservation and protection. Thus, it is pertinent to wonder whether Islamic experiences and practices of sustainable water use and management can still be helpful today.⁸¹³ Traditional Islamic teachings and guiding principles on water conservation draw on the primary source texts of Islam (i.e., the Quran and the Sunnah). The Islamic scriptural sources contain numerous references to water, which can be found in over sixty Quranic verses, as well as in a significant number of hadiths.⁸¹⁴ From the Quranic perspective, water (*al-mā'* in Arabic) is a gift and a blessing from God. Water cannot be privately owned in its natural state (e.g., rivers, lakes, glaciers, aquifers, precipitation) since it is a commonly shared good (cf. Qur'an, 54:28).⁸¹⁵ Besides, nobody should be denied the right to water, because water and

⁸¹³ Izzi Dien (2000) makes a similar point, when he suggests that: “the traditional Islamic experience can provide a rich source of legislation and indeed many countries are already taking steps in this direction. However, it has to be reiterated that any traditional experiences remain historically distant from contemporary application without careful analysis of the concepts which they provide. Understanding the historical and geographical contexts remains vital for the appropriate, contemporary application of any traditional experience. Without such knowledge and understanding, policy-makers might conclude by trying to apply medieval rules to contemporary issues without fully understanding the changes that are brought about by changing circumstances. After all, history is but a mirror which assists insights into present reality and history is not the present reality itself”. See Izzi Dien, *The Environmental Dimensions of Islam*, 49.

⁸¹⁴ See Laura Wickström, “Islam and Water: Islamic guiding principles on water management,” in *Managing Blue Gold: New Perspectives on Water Security in the Levantine Middle East*, ed. Mari Luomi (Helsinki: The Finnish Institute of International Affairs Ulkopoliittinen instituutti, FIIA Report 25, 2010), 99.

⁸¹⁵ Gary L. Chamberlain, *Troubled Waters: Religion, Ethics, and the Global Water Crisis* (Lanham: Rowman & Littlefield Publishers, 2008), 168–9.

other common resources, which are entrusted by God to human protection, belong to all creatures.

Several hadiths say, for example, that feeling a burden of responsibility in showing compassion toward those in need of drinking water (by providing drinking water to thirsty people [*ḥaqq al-shifā*], or by quenching the thirst of cattle and household animals [*ḥaqq al-shirb*]) is a virtuous act — that is, an act of worship toward God.⁸¹⁶ Further, as one particular hadith reports, the Prophet Muhammad commanded that no more than an ankle depth of water could be taken for irrigation purposes.⁸¹⁷ Thus, at that time, the right of irrigation was protected under certain conditions. Additionally, formal bans or restrictions were imposed on the local community in order to avoid cases of overuse, misuse, or unjustified degradation of water bodies and water-related ecosystems. For example, according to the hadith of Muslim (*Saḥīḥ Muslim*, 553), it was forbidden to urinate into stagnant water.⁸¹⁸ Consequently, the Islamic classical jurists always kept in mind the Quranic imperative to reduce and control waste, pollution, and contamination of water (e.g., rivers, lakes and seas).

The Islamic legal texts gave clear-cut indications as to how to allocate water resources and assign water rights.⁸¹⁹ Indeed, the Shariah-based precepts and the derived corpus of Islamic water legislation-jurisprudence provided further directions for the proper conservation

⁸¹⁶ See Karim Makdisi, “Towards a Human Rights Approach to Water in Lebanon: Implementation beyond ‘Reform’,” in *Water as a Human Right for the Middle East and North Africa*, eds. Asit K. Biswas, Eglal Rached, and Cecilia Tortajada (Ottawa, Canada: Routledge, IDRC, 2008), 166. By the same author, see “The Rise and Decline of Environmentalism in Lebanon,” in *Water on Sand: Environmental Histories of the Middle East and North Africa*, ed. Alan Mikhail (New York: Oxford University Press, 2013), 213.

⁸¹⁷ See Richard C. Foltz, “Water in Islam” in *Encyclopedia of Religion and Nature*, eds. Bron Taylor and Jeffrey Kaplan (London and New York: Thoemmes Continuum, 2005), 1715.

⁸¹⁸ See Wickström, “Islam and Water,” 100.

⁸¹⁹ See Wickström, “Islam and Water,” 101.

and distribution of water resources in predominantly Muslim contexts. For instance, the *ḥarīm* institution played a strategic role in protecting natural springs, riverbanks, water wells, expanses of ground around the sides of lakes, and the like.⁸²⁰ Overall, Islam encouraged the development of water management law and governance systems aimed at protecting water and watercourses (including groundwaters and wells). Looking back through the Quran, one finds two basic principles related to water demand management. The first principle asserts that the supply of water is fixed (Qur'an, 40:18), while the second prohibits water waste (e.g., waste of water for drinking purposes; cf. Qur'an, 7:31).⁸²¹ The Quranic verse (23:18) plainly states that water supplies are not unlimited; therefore, they must be preserved and used sustainably: "And we send down water from the sky in fixed measure". Further, according to a hadith from al-Bukhārī (1.200), the Prophet Muhammad used to perform ablution with one *mudd* of water (which is roughly equal to 2/3 of a litre) and used to take a bath with an amount of water equal to 2–3½ litres. He also decreed that wasting water was a forbidden act even when performing ablution on the bank of a large river (*al-Tirmīdhī*, 427).⁸²² Islamic law and jurisprudence, as explained by Izzi Dien, attached particular weight to water distribution rules, which were determined in relation to the origin of the water source. *Rivers, water springs, wells* and *rain water* were the main types of water sources categorised by the Islamic legislator according to definite criteria, such as their size, the kind of water provided, and usage. Rivers, for example, were subdivided into natural rivers, large and small rivers, and man-

⁸²⁰ See Izzi Dien, *The Environmental Dimensions of Islam*, 36–7.

⁸²¹ Naser I. Faruqi, "Islam and Water Management: Overview and Principles," in *Water management in Islam*, eds. N. I. Faruqi, A.K. Biswas, and M.J. Bino (Tokyo: United Nations University Press, 2001), 5–6; as cited in Wickström, "Islam and Water," 100–1.

⁸²² *Ibid.*

made canals and irrigation channels. Large public rivers (*anhūr ‘ammah*) such as the Tigris, the Euphrates and the Nile were considered as commonly shared rivers. Thus, nobody was eligible to reclaim ownership rights over them since these rivers were reserved for the benefit of every single member of the community (provided that no harm was inflicted on others). Izzī Dien further states that the right of flowing water (*ḥaqq al-majra*) is recognised and protected in Islam “according to the saying of the Prophet who addressed an obstinate land owner, saying, ‘by God, the water will be passed to others even over your belly’ (Zuḥaylī, 1985: 5, 605)”.⁸²³

A group of Muslim scholars established a legal and regulatory framework for water resources-utilities ownership. Although water rights could not be owned, individuals and groups alike were bearers of the right to access, use, trade/sell,⁸²⁴ and add value costs (i.e., tariffs) to certain categories of water resources and utilities (cf. Muslim, 1727: “It is better...to go to the woods, [and] cut and sell lumber to feed himself...than to beg people for help”). The Islamic legal scholars, as noted by Naser I. Faruqi, identified three ownership categories of water resources, which help elucidate some Islamic rules on water ownership:

- “Private property (water in private containers, treatment plants, distribution systems, and reservoirs). This is water in which work, infrastructure, and knowledge have been invested to obtain it. The “owner” of the “container” has the right to use it, trade it, or sell it.

⁸²³ Izzī Dien, “Islam and the Environment: theory and practice,” 55–6. Quoted in Wickström, “Islam and Water,” 102.

⁸²⁴ “Water trade can only occur when the amount of water is fixed by either a temporal limit or a collection margin. Private and restricted public water resources can be traded like any other good, but are thus subject to the restrictions that account for all economic goods under Islamic right”. See Katja Hübschen, “IWRM in Praxis,” in *Integrated Water Resources Management as a Governance Challenge for Countries of the Middle East with Special Focus on Yemen, Jordan and Syria* (Berlin: Logos Verlag, 2011), 69.

- Restricted private property (lakes, streams, and springs located in private lands). The owner of the land has special rights over others, but also has certain obligations to them. Within these limits, the owner can trade water like any other good.
- Public property (water in rivers, lakes, glaciers, aquifers, and seas, and from snow and rainfall). Obviously, water in its natural state cannot be bought or sold. However, if infrastructure and knowledge have been invested to withdraw it - for instance, if a public utility constructs a supply, treatment, and distribution system to convey it to people's homes - then the water becomes private property, and the utility has the right to recover its costs".⁸²⁵

It therefore follows that exclusive water rights are denied in Islam. The right to use water for irrigation (which, following traditional Islamic categorisation, has less priority than providing water for humans and livestock) gives farmers the opportunity to develop their own lands for agricultural purposes. If rainwater is collected on public land, as explained by Katja Hübschen, "the owner of the nearest field has the right to use the water first. If several fields are at the same distance to the concerned property, the condition of the respective crops decides on the priority of usage".⁸²⁶ There is another relevant rule about riparian landowners (and their respective share of water), according to which "upstream areas shall be irrigated before those downstream, thus resulting in efficient water use by minimising transportation costs and reducing water losses".⁸²⁷ In addition, a newly cultivated farm located upstream receives its water share "only after the previously established farms have been irrigated".⁸²⁸ Finally, if fields are irrigated by a canal system, those who dug them will automatically have the right to use and benefit from the available water.

⁸²⁵ See Faruqui, "Islam and water management," cit; see also Hübschen, "IWRM in Praxis," 68–9.

⁸²⁶ Katja Hübschen, "IWRM in Praxis," 68–9.

⁸²⁷ Ibid.

⁸²⁸ Laura Wickström, "Islam and Water," 103.

As a way of conclusion, it is important to note that (although limited in scope and extent) ancient customary water laws and practices, as well the above-mentioned Islamic prescriptions as regards water conservation and management have been a model for water laws and regulations in the contemporary Middle East and South Asia. Since the mid-1990s, countries like Saudi Arabia and Iran, for example, have identified new measures and/or have passed water legislation in accordance with Shariah-based law. Saudi Arabia has implemented this kind of legislation with the aim of satisfying the country's increasing water needs. Water-pricing, leakage detection and flow control policies have been taken to ensure good water management performance at the national level. The subsequent creation of water agencies and specialised ministers in charge of regulating water production and distribution have been paralleled with religious initiatives (i.e., water-related fatwas) engaging imams and other Islamic authorities on the theme of water.⁸²⁹ Additionally, Iran, which is the main Shiite-majority country, has established national environmental organisations promoting sustainable water use and management. At an international level, Islamic organisations such as ISESCO,⁸³⁰ and other Islamic environmental organisations (e.g., the Agha Khan Development Network) have massively reassessed the Islamic legacy on water governance issues.⁸³¹

⁸²⁹ On this point, see Peter Beaumont, "Water Institutions in the Middle East," in *Water Institutions: Policies, Performance and Prospects*, eds. Chennat Gopalakrishna, Cecilia Tortajada, and Asit K. Biswas (Berlin-Heidelberg: Springer Verlag, 2005), 131 ff.

⁸³⁰ Islamic Educational, Scientific and Cultural Organization (ISESCO), "Strategy for the Management of Water Resources in the Islamic World," accessed June 7, 2015, <http://www.isesco.org.ma/wp-content/uploads/2015/05/Strategy-for-management-of-water-resources-in-the-Islamic-World.pdf>.

⁸³¹ Chamberlain, *Troubled Waters*, 170.

4.4. Islamic biodiversity conservation and protection systems

In current times, the decline of biological diversity (i.e., species, ecosystem, and genetic diversity), as well as of its various ecological functions is increasingly affecting human/non-human welfare and survival. Nevertheless, faith traditions (Islam included) have figured out and developed effective strategies to protect biospheric health and integrity, which in turn have made continued life on Earth possible and more sustainable throughout the centuries. Islamic ideas and teachings about biodiversity protection, for example, may still play a critical role in raising contemporary awareness about biodiversity and wildlife conservation.⁸³² Of course, the Quran acts as a reference point to Muslims, especially for what concerns resource ethics, animal ethics and ethics of nature.

As stated by Dudley et al. (2005), the customary designation of particular places, trees, or mountains as sacred (*harām/ḥarīm*), and the traditional practice of establishing protected zones (*himás*) in Islam (as well as in other faiths/indigenous belief systems) “can contribute very directly to global conservation efforts”.⁸³³ Dudley et al. add that these symbolic places “are often themselves well-conserved, through traditions that sometimes stretch back for thousands of years”.⁸³⁴ For

⁸³² For a critical assessment of the role of religions in biodiversity conservation, see for example Grzegorz Mikusiński, Hugh P. Possingham, and Malgorzata Blicharska, “Biodiversity priority areas and religions — a global analysis of spatial overlap,” *Oryx* 48, Issue 1 (January 2014): 17–22. See also H.S.A. Yahya, *The Importance of Wildlife Conservation from an Islamic Perspective* (Delhi: Authors Press, 2003); and idem, *Biodiversity Conservation Ethics in Major Religions* (Bloomington, IN: AuthorHouse, 2010), 55 ff.; A.K.H. Solihu, “Valuing Biodiversity: A Qur’anic Account,” *International Journal of Environmental Science and Development* 5, no. 3 (June 2014): 244–50, accessed June 8, 2015, DOI: 0.7763/IJESD.2014.V5.486.

⁸³³ Nigel Dudley, Liza Higgins-Zogib and Stephanie Mansourian, eds., *Beyond Belief: Linking faiths and protected areas to support biodiversity conservation*, Research report by WWF, Equilibrium and the Alliance of Religions and Conservation (ARC) (WWF, December 2005), 8, accessed July 7, 2015, <http://www.arcworld.org/downloads/WWF%20Beyond%20Belief.pdf>.

⁸³⁴ *Ibid.*

example, seasonal himas were historically used to regulate grazing and agricultural activities in general, and in particular to control animal grazing and land regeneration. In Izzi Dien's words, this and similar management systems "could be implemented in contemporary times to control the number of species in one particular habitat".⁸³⁵ Thus, the creation of wildlife, forest and beekeeping reserves through the application of traditional methods can be replicated even today, with some adaptation to present needs and circumstances. Also related to this is the Islamic institution of *awqāf* ("charitable endowments") for the public financing of fauna/flora protection, habitat development, public garden projects, etc., which may serve the same purpose by providing a defence against biodiversity loss.⁸³⁶

Furthermore, looking at the history of Islamic civilisation, traditional Muslim societies established a State-empowered religious institution called *ḥisbah* (literally, "reward")⁸³⁷ — that is, a supervising body set up (a) to maintain "the public law and order"; and (b) to oversee "the propagation of good and the eradication of evils" in commerce, trade, business and other public matters (e.g., public health and safety; protection of natural reserves; inspection of animals; waste management).⁸³⁸ In order to administer the *ḥisbah* system, the Islamic ruler used to appoint a *muḥtasib* ("inspector of weights and measures").

⁸³⁵ Izzi Dien, *The Environmental Dimensions of Islam*, 46.

⁸³⁶ Indeed, it is still active in Turkey and elsewhere in the Mediterranean region. See Medomed.org, "The Islamic Awqaf for Fauna," accessed May 19, 2015, <http://medomed.org/2013/the-islamic-awqaf-with-fauna/>.

⁸³⁷ See, for example, Sami Hamarneh, "Origin and Functions of the Ḥisbah System in Islam and its Impact on the Health Professions," *Sudhoffs Archiv für Geschichte der Medizin und der Naturwissenschaften*, Bd. 48, H. 2 (1964): 157–73, accessed July 5, 2015, <http://www.jstor.org/stable/20775086>.

⁸³⁸ See Abu al-Hasan Ali Al-Mawardi, *Al-Ahkam al-Sultaniyyah* (Beirut: Dar al-Kutub Ilmiah, 1999). See also Mohd Fakhri Mohd Noor, "The function of Hisbah and its Contemporary Context," *Sharia Aspects in Business and Finance (SABF)*, (University of Selangor, UNISEL, 2014), 3, accessed February 1, 2015, https://www.academia.edu/6721320/The_function_of_Hisbah_and_its_Contemporary_Context.

The latter, who was a legal official and a learned jurist, was in charge of regulating and overseeing the fairness of economic-commercial transactions, as well as of more general issues related to public morality and interest, in accordance with the Quranic command *al-Amr bī-l-Ma'rūf wā an-Nahī 'an al-Munkar*, “enjoining what is good and forbidding what is evil” (cf. Qur’ān, 3:104).⁸³⁹ As explained by Izzi Dien, the *ḥisbah* office, which historically functioned as a system of social and environmental accountability, might be re-implemented today in Muslim-majority countries with the goal of creating an environmental monitoring and enforcement agency.⁸⁴⁰ It is therefore contended that the Islamic ethical, legal and policy approaches to biodiversity conservation and protection ought to be reconsidered and revived. Among contemporary Islamic-inspired initiatives, there are two that deserve special attention: (1) the IFEES’ projects, which have been extensively described in Chapter 2 (e.g., the Misali Island Project); and (2) the more recent promotion of biodiversity education programmes in Algerian Quranic Schools, which culminated in the publication of the *Biodiversity Toolkit*. Launched in 2010 in Algeria (and then distributed in other countries such as Jordan, Morocco, Yemen, and Pakistan), this textbook is an Islamic-based action plan for addressing biodiversity protection and other environmental issues. Local imams and imam networks are invited to use this textbook on Quranic eco-teachings during their Friday sermons since this may be an

⁸³⁹ See Ssuna Salim, Syahrul Faizaz Binti Abdullah, Kamarudin bin Ahmad, “Wilayat Al-Hisba: A Means to Achieve Justice and Maintain High Ethical Standards in Societies,” *Mediterranean Journal of Social Sciences* 6, no. 4, S2 (July 2015): 201 ff.; accessed July 8, 2016, DOI: 10.5901/mjss.2015.v6n4s2p201.

⁸⁴⁰ Tony Watling, “The Field of Religion and Ecology: Addressing the Environmental Crisis and Challenging Faiths,” in *Religion: Beyond a Concept*, ed. Hent de Vries (New York: Fordham University Press, 2008), 486. On the same topic, see for example Akhtar, “Towards an Islamic Approach,” 72.

effective way to sensitise the local Muslim population to the importance of biodiversity conservation.⁸⁴¹

4.5. Islamic rules and teachings for reducing pollution and waste

Several Quranic verses unquestionably condemn human profligacy, wastefulness and overconsumption (cf. Qur'an, 6:141, 7:31, and 17:27). The Quran warns Muslims that God will punish them if they indulge in wastefulness (*tabdhīr*) or in excesses (*ifrāt*). Extravagance (in spending and consumption, for example; in Arabic: *isrāf*) and wasteful actions and activities are severely punished in Islam. Indeed, these misdeeds are considered as *fasād*, "corruption",⁸⁴² as the Quran clearly states:

[...] Eat of their fruit In their season, but render The dues that are proper
On the day that the harvest Is gathered. But waste not By excess: for
Allah Loveth not the wasters.⁸⁴³

O Children of Adam! Wear your beautiful apparel At every time and
place of prayer: eat and drink But waste not by excess, For Allah loveth
not the wasters.⁸⁴⁴

The Islamic societal ethics bears on the principles of fairness, justice (*'adāla*) (cf. Qur'an, 42:15 and 15:85) and equity (*ihsān*) in all things and to "all creatures of the Divine system" (animals, human beings, etc.).⁸⁴⁵ The application of these fundamental principles is mainly aimed at achieving the public interest (*maṣlaḥa*) of God's

⁸⁴¹ See The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), *Algeria: Teaching about Biodiversity*, February 2016, accessed March 7, 2016, <https://www.giz.de/expertise/downloads/giz2016-en-religion-algeria-best-practice.pdf>.

⁸⁴² See Saeed, "Economics," 7.

⁸⁴³ Qur'an, 6:141.

⁸⁴⁴ Qur'an, 7:31. See Islamic Sciences & Research Academy (ISRA), "Environmental Ethics in Islam," slide 33.

⁸⁴⁵ Cf. Qur'an, 16:90. See Izzi Dien, *The Environmental Dimensions of Islam*, 27. See also Mohammed Hashim Kamali, *Equity and Fairness in Islam* (Cambridge: The Islamic Texts Society, 2005).

creatures and, more generally, public welfare (*istislāh*).⁸⁴⁶ Besides that, Muslims are asked to constitute a moderate (*tawāzun/tawassuṭ*) and balanced community (*ummatan waṣatan*).⁸⁴⁷ The Quran says in this respect:

Thus have We made of you An *Ummah* justly balanced [...].⁸⁴⁸

The Islamic call for modesty and moderation in human life can thus be applied to the use of natural resources, which are considered as central to the continuation and reproduction of human/non-human life for this and future generations to come. Hence, greed is morally condemned as an offence before God and all created beings. In this view, greedy, disrespectful, and inequitable human attitudes may lead to unsustainable behaviours, which may in turn threaten the environment through the pollution, destruction, and annihilation of the Earth's limited resources.

In current times, indeed, the increasing industrial, agricultural and domestic demand for goods and services is based on the extraction and use of natural resources and is often associated with high rates of urbanisation and technological input. This sustainability problem has brought to the surface new challenges on a global scale, such as uncontrolled pollution and waste disposal. It is noteworthy that, for example, although the anthropogenic origin of global warming (e.g., GHG emissions from fossil fuel-burning power plants) has recently brought the current climate crisis to international attention, some Muslim-majority countries still lag behind in this policy field.

⁸⁴⁶ See Sarah E. Fredericks "Comparative ethics for sustainability," in *Measuring and Evaluating Sustainability: Ethics in Sustainability Indexes* (London-New York: Routledge, 2014), 89 ff.

⁸⁴⁷ Manzoor, "Environment and Values," 159.

⁸⁴⁸ Qur'an, 2:143.

Seen from an Islamic ethical viewpoint, as stated earlier, the processes driving phenomena like air, water, land/soil, and noise pollution, or radioactive (nuclear) contamination are regarded as blatant manifestations of human ecological indifference and irresponsible behaviour toward the environment. The Quran is adamant in its claim that polluting activities are harmful because they pose existential threats not only to individuals, but also to the whole (global) society. Further, Muslim legal scholars have extracted historically-rooted legal maxims and rules for the development of new environmental legislation, as well as for the provision of systems and procedures concerning pollution/waste control and management. For instance, the Islamic general principle of “no harm” contained in the legal maxim “No injury/harm shall be inflicted or reciprocated” (*Lā ḍarār wa-lā ḍirār fī'l-Islām*), which echoes a Prophetic hadith, has been widely used by Islamic scholars in matters of social ethics; however, the same principle can easily be applied to issues regarding environmental ethics, including pollution ethics. As stated by Luqman Zakariyah in a recent book (2015), “Ibn ‘Abd al-Barr (d. 463/1071) in his *Tamhīd* gives an interesting distinction between the two words: ‘*Ḍarār* is harm inflicted on another and from which the perpetrator derives benefit [*manāfi*], while *ḍirār* is harm inflicted on another from which no one benefits’”.⁸⁴⁹ Thus, preventing injuries (*al-ḍarār yuzāl*), and minimising (or avoiding) the infliction of harm (*ḍarār*) either on oneself or on others (human and non-human beings alike), are considered as fundamental Islamic duties.⁸⁵⁰ Muhammad Nouh summarises this point as follows:

- “Warding off evil takes precedence over bringing benefits”: If an act that a person intends to do brings benefits but could also cause major harm to others, such an act is forbidden in Islam. For example, if a state

⁸⁴⁹ Zakariyah Luqman, *Legal Maxims in Islamic Criminal Law: Theory and Applications* (Leiden: Brill-Nijhoff, 2015), 160.

⁸⁵⁰ Izzī Dien, *The Environmental Dimensions of Islam*, 114 ff.

dumps chemical waste in oceans, it gains benefits, but causes harm to sea life and humans. Therefore, such an act is forbidden.

- “Sustaining personal harm to ward off public harm”: the damage resulting from avoiding the frequent use of pesticides and relying on biological rather than chemical resistance is much less than the damage inflicted on many creatures as a result of polluting the soil with chemicals, adversely affecting human beings and animals as well as killing micro-organisms in the soil that are needed for its fertility.

- “Harm shall be removed”: The causes of harm must be removed. When ships dump waste in the sea, they pollute and destroy sea life and disturb the environment balance.⁸⁵¹

To sum up, it seems apparent that Islam: (a) forbids harmful and dangerous acts such as waste accumulation (e.g., domestic, urban, radioactive, chemical, pharmaceutical waste), dumping and littering; (b) discourages the uncontrolled production of emissions resulting either from the ordinary activities of daily life (e.g., transportation) or from industrial activities.⁸⁵² On that account, some contemporary Islamic scholars have analysed the Islamic ethico-religious view on earthquakes, disasters, and human safety. In so doing, they aimed to understand whether Islamic ecological wisdom could minimise the effects of human-induced natural catastrophes.⁸⁵³ This thorny issue, as argued by A.K. Hussain Solihu in a recent article, is closely related to the question of *al-qaḍā’ wa al-qadar* (“human free will and predestination”). Natural disasters, as Solihu tells us, “are attributable to God because He created the natural environment with conditions that, when transgressed, may yield unfavourable results. However, on a lower level, humanity is responsible for provoking or abusing this

⁸⁵¹ Muhammad Nouh, “Sustainable Development in a Muslim Context,” 42, accessed June 1, 2016, http://earthcharter.org/invent/images/uploads/11%20Manuscrip_Muhammad.pdf.

⁸⁵² See Baghader et al., “Environmental Protection in Islam,” Section Three, 8.

⁸⁵³ See, for example, Mohsen Ghafory-Ashtiany, “The Islamic View of Earthquakes, Human Vitality and Disaster,” *Disaster Prevention and Management: An International Journal* 18, Issue 3 (2009): 218–32, accessed May 8, 2015, <http://dx.doi.org/10.1108/09653560910965600>.

condition”. He thus asserts that, according to the Islamic moral view, God created everything in a state of inherent goodness. In his view, this is valid independent of the fact that human beings, who are free-acting individuals, are prone to commit bad deeds or carry out self-interested actions (e.g., unsustainable land use practices and activities, massive deforestation, etc.).

In conclusion, it can be said that the rules and duties Islam prescribes include an individual moral duty not to deliberately inflict damage upon oneself and others (e.g., future generations), the ethical responsibility not to cause harm, and the performance of acts that do not cause serious risk of harm. However, as correctly observed by Jensen, personal ethical motivation to act for the common good enters the stage only “if individuals come to believe that they *should* contribute (and expect others to contribute) and they act accordingly, even though strictly speaking it is not in their self-interest”.⁸⁵⁴

⁸⁵⁴ Jensen, “Climate change and motivation,” 12.

Concluding remarks

Islamic moral-ethical and legal-juridical perspectives on the conservation, protection, and management of communal (shared) resources (i.e., what I have called the “Islamic commons”, although they are often based on pre-Islamic management systems) may provide a rich and complex value system from which to draw in order to promote ecologically safe, socially inclusive, and economically fair governance models in predominantly Muslim contexts. These communal schemes may, however, acquire significance insofar as they reject the ruinous tendency of religious conservatism in general, and radical Islam in particular, to espouse a literalist interpretation of scriptural texts, as well as to *uncritically adopt* and *integrally apply* traditional Islamic methods, systems, and institutions to present times. For example, it is not excludable that the earlier-mentioned *hisbah* system, which is 1,400 years old, will somehow carry out the function of ecological stewardship in some Muslim-majority countries. Regrettably, however, contemporary Islamist groups have misused this traditional socio-economic and moral institution. For instance, the IS-Daesh⁸⁵⁵ jihadist movement has extensively made use of *al-hisbah* offices (“religious/moral police”) in its occupied territories. The IS Hisba groups have committed odious crimes in Syria and Iraq, such as targeting and killing civilians, oppressing women, and destroying ancient architectural monuments considered as pagan and polytheistic, just to mention a few.⁸⁵⁶ This delicate issue, which cannot be covered in

⁸⁵⁵ The Islamic State (IS) (formerly ISIS-ISIL), also known by its Arabic language acronym *Daesh* (which stands for *al-Dawlah al-Islamiyyah fī l-‘Irāq wa al-Shām* (“the Islamic State of Iraq and Syria”)) is a Salafī jihadist militant group, which was designated as a terrorist organisation by the United Nations, the United States and many other countries in the world.

⁸⁵⁶ See, for example, Rasha Al-Aqeedi, “Hisba in Mosul: Systematic Oppression in the Name of Virtue,” Occasional Paper, GW Program on Extremism, George

this thesis, has nevertheless potential for future enquiry. Indeed, the question remains whether the Islamic approach to environmental/natural resources conservation, protection, and management has any meaningful bearing on contemporary ecological challenges.

Against this background, it seems that the diffusion of ecological innovations by readapting Islamic communal management systems to present-day conditions can facilitate, *but not determine*, the gradual dissemination of technological knowledge and its associated skills among Muslim “local commoners”. Thus, either State/non-State or governmental/non-governmental actors engaged in intervention strategies for sustainable development in Muslim-majority countries ought to take into account the possibility: (a) of reviving customary nature conservation techniques and institutional models; (b) of readapting, for example, existing Islamic ecological knowledge to the changing needs of the present. Putting this long-lasting grassroots experience of the environment into practice may speed up developmental processes in contemporary Muslim societies. Thus, by way of conclusion, I would argue that a critical analysis of what I have termed the ‘Islamic commons’, and, more specifically, of the Islamic discipline of open-access property regimes of natural resources may help overcome the political-institutional and governance obstacles to sustainability in some contemporary Muslim-majority states. In addition, a serious reconsideration of this discipline may also contribute to the transnational design and implementation of community-based environmental governance systems by offering instruments and

Washington University, February 2016, accessed July 7, 2016, https://cchs.gwu.edu/sites/cchs.gwu.edu/files/downloads/AlAqeedi_Paper.pdf.

institutions (e.g., the hima system) for a more sustainable conservation and protection of our global geoheritage.

Part II – Social movements for sustainability

Section III: Sustainability movements in Arab-Muslim countries

Introduction

Because there can be no permanent solutions in a world that is ecologically and culturally dynamic, these choices will have to be made again and again as circumstances evolve. Therefore, moving toward sustainability will require a radically broadened base of participants and a political process that continuously keeps them engaged. The process must encourage the perpetual hearing, testing, working through, and modification of competing visions at the community level.⁸⁵⁷

Sustainability will be achieved, if at all, not by engineers, agronomists, economists, and biotechnicians but by citizens.⁸⁵⁸

The “commons debate” sketched out in the previous Section (see Section II) has fostered across the world what some contemporary scholars call “commons struggles”, i.e., civil struggles for regaining and sustainably managing the “commons”.⁸⁵⁹ The main protagonists of these civil society struggles are, among others, social movements for sustainability. Social movements, as observed by Diani, can be defined as “networks of informal interactions between a plurality of individual groups, or associations, engaged in a political conflict, on a basis of a shared identity”.⁸⁶⁰ This helpful definition, however, partially fits with contemporary sustainability movements. These new social movements, indeed, are only “silently political” since they are not involved in direct political action. Further, they mostly engage in collective action

⁸⁵⁷ Prugh, Costanza, and Daly, *Local Politics*, xiv.

⁸⁵⁸ Prugh, Costanza, and Daly, *Local Politics*, 5.

⁸⁵⁹ On commons struggles, see, for example, Danijela Dolenc et al., “The Struggle for the Commons in the Balkans,” Grupa 22 Working Paper Series, 2013, accessed May 12, 2015, http://www.grupa22.hr/wp-content/uploads/2014/01/G22-WP-Struggle-for-the-Commons_Balkan-Forum-2013.pdf; Nick Dyer-Witheford, “Antonio Negri on Information, Empire and Commonwealth,” in *Critical Theory for Library and Information Science: Exploring the Social from Across the Disciplines*, eds. Gloria J. Leckie, Lisa M. Given, and John E. Buschman (Santa Barbara, CA: ABC-CLIO, 2010), 268.

⁸⁶⁰ Mario Diani, “The Concept of Social Movement,” *The Sociological Review* 40, Issue 1 (February 1992): 13, accessed May 7, 2015, DOI: 10.1111/j.1467-954X.1992.tb02943.x.

endeavours aimed at responding to *localised* sustainability challenges. For this reason, they can be considered as local engines of a global *socio-ecological transition*. In technical-scientific language, as stated by Arno Behrens and Bert Colijn, the term “socio-ecological transition”:

[...] is based on the notion that human societies interact with systems in the natural environment. There are different patterns of this interaction, referred to as “socio-ecological regimes”. These are characterised by the different energy systems upon which they depend, i.e. by the sources and dominant conversion technologies of energy. A transition from one socio-ecological regime to another is then called a socio-ecological transition (SET).⁸⁶¹

Further, as observed by Heyndrickx et al., “the socio-ecological transition is best defined as a major change in the patterns of human social organisation, culture, production and consumption that is driving society towards a more sustainable future”.⁸⁶²

Yet, in order to make a radical shift toward what I would call a “sustainability regime” (i.e., toward a regime of socio-ecological sustainability), the underlying non-linear transitional process, which involves single individuals as well as the communities in which they live and prosper, has to be *dynamic*, *incremental*, and *adaptive*. For example, the sedimentation of collaborative ecological learning experiences at the local level — which may, on the one hand, benefit society through community-oriented and associational activities (e.g.,

⁸⁶¹ Arno Behrens and Bert Colijn, “The Socio-Economic Transition towards Sustainability and its Impacts on Jobs in Europe,” in *Intereconomics* 47, no. 3 (2012): 147, accessed July 7, 2015, <http://archive.intereconomics.eu/year/2012/3/green-growth/>.

⁸⁶² See Christophe Heyndrickx, Rodric Frederix, and Joko Purwanto, “Sustainable Urban Transport Strategies and Job Creation,” NEUJOBS Project, Working Paper, no. 15.3 (2013), accessed August 9, 2015, http://www.neujobs.eu/sites/default/files/NEUJOBS_D15_3_20131125_finalpdf.pdf.

ecological education, community gardening)⁸⁶³ and, on the other hand, produce significant socio-economic rearrangements at the national as well as at the regional level — is not a predetermined process. Instead, it is gradually constructed and continually renegotiated by people through their everyday social interactions and/or in their public and private interactions with ecological civil society organisations. It can also be argued with a great deal of conviction that the basic mechanisms triggering *sustainability transitions* are neither univocally experienced nor solely determined by the various social actors (activists, engaged citizens, youth-driven movements, etc.) directly involved in sustainability engagement activities.⁸⁶⁴ “Uninitiated” citizens, intellectuals, policy-experts and scientists, together with governments and other institutional, economic and financial actors may also play a crucial role in this respect.

Most importantly, sustainability transitions result from micro-cultural and (long-term) micro-social processes of *value-attribution*, as well as from processes of *signification (meaning-making)* in people’s real-life events.⁸⁶⁵ Value-attribution occurs, for example, when individuals and/or organised groups of people begin (a) to attach value to “someone/something” (e.g., plants, animals, ecosystem services); (b) to cultivate a commonly shared (in our case: ecological) conscience and awareness; and (c) to build personal and collective identities, especially in reaction to uncertain, risky, intolerable, or unjust situations.⁸⁶⁶ Signification (meaning-making) is a social process that enables people to attach an affective (that is, emotional) meaning and significance to

⁸⁶³ For example, either by means of eco-educational programmes or by promoting concrete eco-activities, such as urban community gardens, permaculture, and so forth.

⁸⁶⁴ See also Prugh, Costanza, and Daly, *Local Politics*, 61.

⁸⁶⁵ See Loki, “Marshall Ganz on Narrative and Social Movements,” *Shouting Loudly* (blog), accessed October 4, 2016, <http://www.shoutingloudly.com/2009/04/01/823/>.

⁸⁶⁶ Johnston, *Religion and Sustainability*, 167.

reality by relying on *public stories* or *narratives*. The latter are shared cultural stories expressing the collective memory of a given society. Specifically, the moral content of these public stories or narratives, when reactivated, is potentially able to motivate and empower people to build and exercise common agency in uncertain and controversial real-life situations.⁸⁶⁷ In our context, this points to the importance of reconsidering *sustainability narratives* (i.e., stories of sustainable change that actually tell you about *why* you do what you do) as what I would call “moral filters” of human behaviour and action for sustainability. It should be said, however, that there are many circumstances in which the supposed normative force of people’s individual as well as collective moral-ethical judgements about sustainability issues is not sufficient for warranting coherent and systematic *action* for sustainability.⁸⁶⁸ Indeed, the moral-ethical systems that characterise contemporary societies can play a *performative* function only insofar as both individuals and groups are able or even willing to retrieve and, above all, *affectively experience* the episodic memories associated with sustainability matters. Otherwise, these inherited moral-ethical systems may remain stocked in what I suggest calling people’s “cultural DNA”, perhaps risking to be either forgotten or totally dismissed later on.

To sum up, people’s rediscovery and re-experience of constructive moral-ethical values, symbols, beliefs, and systems of credence may become important sources of sustainability consciousness, mobilisation, and action. This is the reason why the

⁸⁶⁷ See Loki, “Marshall Ganz on Narrative,” n.p.; Marshall Ganz, “Leading Change, Leadership, Organization, and Social Movements,” in *Handbook of Leadership Theory and Practice: A Harvard Business School Centennial Colloquium*, eds. Nitin Nohria and Rakesh Khurana (Boston, Mass.: Harvard Business Press, 2010), 527.

⁸⁶⁸ See Roland Mees, “Sustainable action and moral corruption,” in *The Politics of Sustainability: Philosophical Perspectives*, eds. Dieter Birnbacher and May Thorseth (Abingdon, Oxon; New York, NY: Routledge Studies in Sustainability, 2015), 110.

recent rise of sustainability activism and advocacy is by some means related to the (re-)interpretation of a sort of moral-ethical legacy. Hence, it seems that, in most cases, present-day social mobilisation for sustainability (as performed, for example, by sustainability movement actors) is a *morally/ethically-motivated* phenomenon.⁸⁶⁹ However, people's eco-ethical commitments and moral claims, to be really effective, have to be concretely enacted through individual as well as collective practices of sustainability.

There is little doubt that there are many historical moments of political, socio-economic, or cultural “break-down” when some individuals, along with their national/local communities, started to endorse, reframe and reproduce a set of ecological ideas, values, and norms within their small-scale, daily-life contexts. These committed people (and their communities of origin) can be regarded as socialised moral agents who: (a) experience a new reality in light of the challenging context of the ecological crisis and, consequently, make a paradigm shift in their perception of life; (b) somehow rediscover their own deep-seated moral-ethical sentiment (either socially learned or culturally inherited from ancestral traditions), which might act as a motivating factor for effectively responding to present-day sustainability problems; and (c) take concrete action, for example, through participation in social movements for sustainability, Environmental Non-Governmental Organisations (ENGOS), etc. Additionally, these social agents of sustainable change often claim (1) to defend their inner desire for “the common good and interest” instead of nurturing selfish, greedy, and material wealth-driven socio-economic

⁸⁶⁹ By assuming this, it is logical to stress that social movements and, more specifically, social movements for sustainability, are acting as privileged vectors of personal and collective action for socio-ecological change, as well as strong advocates of sustainability transitions.

attitudes; (2) to rebuild their personal and social-communitarian ties, often wrecked by alienating forms of individualism and excessive consumerism; (3) to engage in cross-cultural conversations about sustainability with people who have different value structures. Therefore, the issue at stake here is not just looking at sustainability transitions as the end results of a radical transformation of personal lifestyles and people's quality of life, or as a revolution in global consumption and production trends. Rather, sustainability transitions seem to entail the *value-based* re-framing and the *morally-/ethically-sensitive* reinterpretation of the broader cultural, economic, social and political goals of a given human society.

As noted earlier, contemporary scientists, experts, politicians and policy-makers are partially involved in this transition towards a sustainable present and future. Yet, the “real” actors are citizens. In a truly functioning representative democracy, for example, as acutely observed by Prugh et al., the “stakeholder base” needs to be broadened.⁸⁷⁰ Prugh et al. argue that ordinary citizens can become “eco-citizens” — i.e., ecologically-responsible citizens⁸⁷¹ concerned with the flourishing of their locally decentralised “peer community” — when they feel directly and deeply engaged in the act of “recognizing and identifying social problems needing attention, setting the agenda, and staging the debate. Experts would act as ‘teachers and interpreters’ to make sense of the technical complexities of the issues to inform policy but not to make it”.⁸⁷² It is thus claimed that citizens could more easily “identify with and act upon a personally perceived vision of the

⁸⁷⁰ Prugh, Costanza, and Daly, *Local Politics*, 95. Climate change, for example, has global implications and demands global action. Ideally, every human being is a potential stakeholder.

⁸⁷¹ As stated by Prugh et al., a new eco-citizenship view should be based on “common deliberation, common decision and common work”. Prugh, Costanza, and Daly, *Local Politics*, 106.

⁸⁷² Prugh, Costanza, and Daly, *Local Politics*, 97.

common good” by “putting themselves in one another’s shoes”.⁸⁷³ In their view, it would not be possible to construe an alternative to the much-flaunted *market-oriented* solutions to ecologically unsustainable realities without adopting a more participatory and pluralistic democratic structure. Consequently, contemporary social movements for sustainability are trying to work out, for example, how to create a new model of civil participation in the governance of communal resources.

To date, indeed, there has also been scarce public attention paid to the importance of understanding (or of even changing) “the *stories* that culture understand as normative” with the aim of creating a (globally-)shared ecological culture.⁸⁷⁴ Individual citizens are often concealed behind a ‘consumer mask’ that has totally disempowered them. In many cases, they neither express their preferences nor make decisions as citizens but, at best, as isolated consumers. Undeniably, this pervasive ‘consumer logic’ has dehumanised and depoliticised almost all the citizens of representative democracies and of other political systems (e.g., authoritarian and semi-authoritarian systems). According to Prugh et al., since the power and responsibility of individual voters has been partly delegated to someone else (the legislature, the city council, the courts, the bureaucracy, politicians, etc.), ordinary citizens simply shift the blame to politicians or other professionals “when things do not work”.⁸⁷⁵ Sustainability problems, on the contrary, mostly appear to be both individual and collective action problems which could be dramatically alleviated through localised,

⁸⁷³ Prugh, Costanza, and Daly, *Local Politics*, 101.

⁸⁷⁴ Johnston, *Religion and Sustainability*, 164.

⁸⁷⁵ Prugh, Costanza, and Daly, *Local Politics*, 98. On this point, see also Mees “Sustainable action and moral corruption,” 111–2.

self-organised, and self-governed civic and civil initiatives (on this point, see Chapters 5 and 6).⁸⁷⁶

Bearing this in mind, it is also important to note that, in some circumstances, sustainability-oriented strategies of action are collective and communitarian in nature, but global in scope. For instance, the current social mobilisations of national civilian populations, local sub-groups and communities (e.g., indigenous people) across the world, which take direct action for safeguarding life on Earth, for ensuring food security and sovereignty in their own country, etc.,⁸⁷⁷ have been so strong and visible at the global level that they have stimulated political, socio-economic, and cultural debates in international-mainstream arenas. Numerous acts of ecological indignation, as well as socio-economic grievances have often occurred due to, for example, the unsustainable consequences of unchecked global economic growth. Protesters mainly contend that neoliberal economic globalisation has intensified local socio-economic inequalities and ecological degradation. In their view, this unfair system has not only affected non-OECD countries, but also affluent and highly industrialised countries.

Furthermore, as Johnston tell us, the diversified types of contention we witness today seem to demonstrate that for these new social movements (i.e., globalised social movements for sustainability), “sustainability is acting as a new metanarrative, a large-scale story that is able to weave together a wide variety of value sets”.⁸⁷⁸ In this respect, he adds that “sustainability has become a term that mediates a brokering process between different constituencies, their epistemologies, and

⁸⁷⁶ Indeed, as observed by Prugh et al., “self-governing citizens would more likely learn the ecological costs of their community’s lifestyle and socioeconomic character”. Prugh, Costanza, and Daly, *Local Politics*, 99.

⁸⁷⁷ Other examples might be local campaigns against land grabbing in developing countries; protests against massive deforestation; land- and water-rights campaigns, climate justice and anti-globalisation resistance.

⁸⁷⁸ Johnston, *Religion and Sustainability*, 167.

their visions of the good life”.⁸⁷⁹ Indeed, the historical amalgam of the moral and ethical traditions constituting the core of any world culture has provided human societies with a corpus of sustainability values, principles, rules, methods and “stories” (or narratives). Thus, it is worth analysing how different social movements’ actors *frame* and *give meaning* to their own sustainability problems by using, for example, sustainability narratives and/or “sustainability” as a metanarrative, which in turn ought to help initiated people act ethically-morally while fixing such problems. More specifically, it is also worth examining whether, and to what extent, a religiously-inspired ecological morality and set of ethics, once activated, could enter awareness, provide motivation and guide social movement actors’ concrete activities for addressing contemporary sustainability problems.⁸⁸⁰ The empirical study presented in Chapter 6 will specifically address whether and to what extent the contemporary Muslims of the Arab world engaged in selected Arab-based social movements for sustainability hinge on Islamic ecological thought and ethics to provide motivation for action.

This premised, Part III is structured as follows. Chapter 5 provides a general overview and analysis of the specialised literature on the motivational drivers of individual as well as collective social action for sustainability. Some references will be made to the most recent studies in behavioural economics, cognitive science, and social/environmental psychology, which, in my view, may lack sufficient explanatory power. I will therefore propose an alternative

⁸⁷⁹ Johnston, *Religion and Sustainability*, 11.

⁸⁸⁰ This challenging analytic work, it seems to me, may greatly enrich the study of the moral forces lying behind contemporary mobilisation for sustainability in Arab-Muslim countries. See Johnston, *Religion and Sustainability*, 11. See also Scott Atran et al., “Folkecology, Cultural Epidemiology, and the Spirit of the Commons: A Garden Experiment in the Maya Lowlands, 1991–2001,” *Current Anthropology* 43, no. 3 (June 2002): 421, accessed June 22, 2014, <http://www.journals.uchicago.edu/doi/10.1086/339528>.

view on the motivational features of contemporary sustainability engagement and activism, with specific reference to the “Value-based Social Movements (VSMs) research” literature. In order to further illustrate my point, I will then briefly present the four case studies selected for the qualitative/ethnographic empirical study, i.e., two permaculture movements and two environmental/eco-justice movements located in Morocco and Tunisia. Chapter 6 is dedicated to the empirical analysis of the motives, i.e. the “moral-ethical rationales” that have guided sustainability mobilisation and action in these four social movements for sustainability. Most of these social movements have emerged in the two North-African countries as a reaction to the aftermath of the Arab revolts of 2011. I will also assess the ways in which these social movements for sustainability have: (1) problematised and framed sustainability-related issues; (2) mobilised around them; (3) created ad hoc organisations, associations and/or networks of associations; (4) acted in order to understand and solve some pressing sustainability problems. The empirical research, which triangulates between a narrative analysis and a frame analysis approach, includes ethnographic data derived from participant observation, in-depth semi-structured interviews and focus-group interviews conducted with thought leaders, activists, and participants to these sustainability-oriented organisations, associations and/or networks of associations. Furthermore, I will essentially explore the moral-ethical content of their narratives and practices of sustainability, as well as the main motivational frames they use to mobilise and recruit people to participate in sustainability activities and campaigns. In parallel, I will investigate whether and to what extent the appeals to an Islamic moral-ethical and spiritual heritage could be a motivational factor for

sustainability engagement in Tunisia and Morocco.⁸⁸¹ Interestingly, the analysis of the above-mentioned case studies, which are rigorously non-political and non-religious (secular) social movements for sustainability, offers empirical evidence for the existence of different types of “moral-ethical rationales” (either hidden or explicit) for both personal and community mobilisation and action for sustainability. Some of the motivational frames used by the activists and participants in such movements are either spiritually-attuned or religious-resembling. Yet, religion (notably, Islam as an institutionalised religion) per se does not seem to have been the primary motivation for personal empowerment and collective action for sustainability in the two chosen countries. A loosened and more syncretic form of spirituality, which might not necessarily include an explicitly religious set of eco-ethics, is thus preferred by the interviewed thought leaders, activists, and participants.

⁸⁸¹ Unlike Islamic environmentalism, Muslim environmentalism draws its inspiration from a variety of sources, which are not exclusively religious. On this point, see Yazid, “Faith-Based Environmentalism,” 12.

5. Sustainable thought and action: the rediscovery of moral agency and motivation

Several policies and strategies have been proposed by contemporary political leaders, policy-makers, and economists to prevent this predictable (and yet scientifically predicted) ecological catastrophe from happening. Cognitive and social/environmental psychologists, for their part, have scrutinised, for example: (1) whether and how people's lack of interest with regard to the environment is influenced by loss aversion, framing, habits, cognitive biases, risk perception and interpretation; (2) the correlation between religious values and environmental concern.⁸⁸² Economists, instead, as Whitmarsh puts it, have started to wonder why there is "a tendency for the public to dissociate themselves from the causes, impacts, and responsibility for tackling" sustainability problems.⁸⁸³ As observed above, these groups of scholars and economic experts have identified the essential precondition for the success of any "green shift". In practice, they believe that a radical shift of this sort would require substantial changes in our individual and collective behaviour. Thus, they seem to maintain that the economic analysis of human behaviour and social institutions may help solve the problem at its root.⁸⁸⁴ In a

⁸⁸² See, for example, P. Wesley Schultz, Lynnette Zelezny and Nancy J. Darlymple, "A Multinational Perspective on the Relation between Judeo-Christian Religious Beliefs and Attitudes of Environmental Concern," *Environment and Behavior* 32, no. 4 (July 2000): 576–91, accessed November 7, 2015, DOI: 10.1177/00139160021972676.

⁸⁸³ See Lorraine Whitmarsh, "What's in a name? Commonalities and differences in public understanding of 'climate change' and 'global warming'," *Public Understanding of Science* 18, no. 4 (2009): 401, accessed June 4, 2014, DOI: 10.1177/0963662506073088. As cited in Carmen Lawrence, "Opportunities for shaping individual behaviours through communicating the science of climate change" (Paper presented at the Australian Science Communicators Hot Air Symposium, Perth, Australia, March 24th, 2009, http://www.asc.asn.au/wp-content/uploads/2009/08/lawrencehotairtalk_march20092.pdf, accessed June 24, 2014, note 1.

⁸⁸⁴ Lawrence, "Opportunities for shaping individual behaviours," 2.

nutshell, they contend that it is imperative for people to meet the most urgent ecological challenges through a massive behavioural change, which mostly includes individual patterns of thinking and acting.⁸⁸⁵

The embryonic field of *behavioural economics* has got to grips with the integration of recent research findings in the field of social and cognitive psychology in the economic domain. This so-called behaviour-change literature is specifically committed to a better understanding of how individual desires and attitudes can actually drive behaviour, which in turn is thought to affect individual choices. The ultimate goal of such a theoretical endeavour (elsewhere called *behavioural engineering*) is to predict, for example, consumer behaviour, so that policy-makers could be able to prescribe efficient solutions to sustainability problems by working out the “right” strategies (e.g., material incentives) to persuade citizens to adopt pro-environmental behaviour.⁸⁸⁶ These normative models of consumer choice not only try to elucidate what rational consumers *should* do, but they also pursue a predictive aim. That is, they intend to foresee what consumers would probably do in real-life situations.⁸⁸⁷ Behavioural economists seek to identify the causal factors (i.e., *external* driving factors) affecting consumer behaviour. According to them, environmental policy-making is essentially designed to influence and, at best, direct individual choices. Therefore, behavioural economists

⁸⁸⁵ Ibid. However, analysts and policy-makers have invested money, time, and energy in understanding, for example, the anthropogenic impacts on climate change, rather than studying how we can stimulate the changes in human behaviour to pre-empt the deadly threat of global warming.

⁸⁸⁶ Alana Cornforth, “Behaviour Change: Insights for Environmental Policy Making from Social Psychology and Behavioural Economics,” *Policy Quarterly* 5, no. 4 (November 2009): 21.

⁸⁸⁷ See Richard Thaler, “Toward a positive theory of consumer choice,” *Journal of Economic Behavior and Organization* 1 (1980): 39, <http://www.eief.it/butler/files/2009/11/thaler80.pdf>, accessed June 1, 2014. See also Prugh, Costanza, and Daly, *Local Politics*, 79.

engage in the identification of the most effective ways for producing substantial changes in human behaviour. This, in their view, may induce people to either promote or support “eco-friendly” ideas and practices. In this view, human behaviour is at the root of the current global ecological crisis; hence, unsustainable behaviour should be modified in order to boost, for example, climate stability, biodiversity conservation and protection, and so forth.⁸⁸⁸

However, the deterministic behavioural approaches mentioned above, as Elizabeth Shove puts it, have failed to take into account the “endogenous and emergent dynamics of social change” which set up the context for sustainability transitions.⁸⁸⁹ The point to make here is that contextual-situational factors are not external to individuals. Social reality, indeed, is continuously shaped by people’s mutual interactions and complex webs of socio-ecological relationships. In short, she argues that both individuals and social units are “autonomous agents of choice and change”.⁸⁹⁰ Consequently, individual aspirations and socially-embedded collective practices for sustainability might be either extraneous or insensitive to top-down policy-making efforts to encourage green marketing, green energy access and use, or new styles of purchasing and consuming goods. By way of example, it is sufficient to mention the case of contemporary social movements for sustainability, whose motivational thrust for ecological sensitivity and action does not seem to be imposed on their respective members through a “green tax” and/or an environmental policy prescription. Rather, it emerges from the adaptive processes of ecological learning that characterise most contemporary experiences of sustainability (e.g.,

⁸⁸⁸ Lawrence, “Opportunities for shaping individual behaviours,” 2.

⁸⁸⁹ Elizabeth Shove, “Beyond the ABC: climate change policy and theories of social change,” *Environment and Planning* 42, no. 6 (2010): 1279.

⁸⁹⁰ *Ibid.*

outdoor agricultural activities and other grassroots participatory practices).⁸⁹¹ In specific cases, moral-ethical motivations are considered among the main “engines” that activate people’s intentions to engage in social movements for sustainability.

As observed earlier, socio-ecological change dynamics are vital processes of change. Thus, they compel us to identify and re-conceptualise both individual and collective motivational claims regarding sustainability engagement. This is a desirable endeavour because it rules out the “behaviourist temptation” to investigate how to shape individual and collective behaviour (either forcefully or deceptively). Socio-ecological change, indeed, may occur in the presence of publicly shared values as far as such core values can be the answer to deep questions about the meaning and purpose of human life, or provide a rationale for people’s eco-sustainable courses of action.⁸⁹² To conclude, it is worth adding that the “green public sphere” is the common space in which a real social change is actually taking place today.

Meanwhile, public policy-makers and the institutional arrangements in place where they operate have not carefully addressed these matters. Lawrence quoted Jackson as stating that policy-makers got the wrong end of the stick because their conception of human behaviour still rests on “the economic rationality of the individual consumer or the supposed ‘commodity fetishism’ of consumer society”.⁸⁹³ The design of “eco-friendly” policies, as Lawrence puts it, shall include the examination of:

⁸⁹¹ See Herbert Blumer, “Collective Behavior,” in *Principles of Sociology*, ed. A. M. Lee (New York: Barnes & Noble, 1951), 199. See also Prugh, Costanza, and Daly, *Local Politics*, xiv.

⁸⁹² On this point, see Johnston, *Religion and Sustainability*, 184.

⁸⁹³ Lawrence, “Opportunities for shaping individual behaviours,” 4.

what values people bring to their assessment of the environment and to the consumption of resources; how people judge the seriousness of the risks they confront and how they respond to such threats; how attitudes toward environmental issues are formed and changed; what methods of persuasive communication, including the use of fear, are most likely to facilitate changes to attitudes and behaviour and which could backfire; what are the most effective techniques for producing rapid and widespread behaviour change; and what barriers and habitual modes of thinking prevent the adoption of climate friendly patterns of behaviour and what incentives and social forces facilitate such behaviours.⁸⁹⁴

Behavioural and lifestyle issues are notoriously difficult to scrutinise because they are both setting- and person- specific. Therefore, it is uncontroversial to say that these phenomena cannot be easily framed by using the analytical lens of rational-choice theory.⁸⁹⁵ Nevertheless, newer generations of behavioural economists have claimed that public opinion and knowledge play a decisive part in environmental policy design and implementation. In their view, this is the best way to mobilise the widest possible public acceptance and support for environmental policy options; hence, they focus on people's general judgments on the fairness and efficacy of a given set of public policies. According to them, the so-called "attitude-behaviour gap" is due to the fact that — whatever information people get from external sources — personal, social and economic barriers inhibit any form of pro-environmental attitude and action.

As explained by Lawrence, some analytical works in the same field have also sought to explain why citizens overestimate or underestimate risk. Similar research studies have enquired into "values, benefits and costs individuals expect from various actions, their perceptions of their ability to undertake such actions, their beliefs about

⁸⁹⁴ Ibid.

⁸⁹⁵ Ibid. "Neoclassical economic theory is built on the assumptions that people 'maximise utility' (satisfaction), have rational economic preferences among identifiable outcomes, and act independently on the basis of complete and relevant information". See Cornforth, "Behaviour Change," 21.

how others will act and their habitual patterns of thinking and acting”.⁸⁹⁶ For example, cost-benefit analysis applied to environmental public goods is a technique devoted to the formulation of *willingness-to-pay* or *willingness-to-accept* surveys. In brief, these scholars argue that loss aversion in individual decision-making entails that framing information in terms of losses or gains can lead to different outcomes. Moreover, individual choices might also be affected by the order in which people consider benefits and costs. In this respect, Cornforth states that “prompting people to consider benefits before costs can make them more accepting of policy proposals”.⁸⁹⁷ A substantial body of literature on risk assessment and processing has dealt with human responses to environmental risk. These scholars have found that people generally use both analytical and emotional systems to process and assess risk. In their view, policy designers ought to take into account people’s fear of risk as a powerful emotional-processing phenomenon.⁸⁹⁸ Cornforth also asserts that when assessing risk through the emotional system, individuals tend to underestimate the danger of physically and temporally distant events they have neither readily imagined nor vividly experienced “and to overestimate the likelihood of low-probability events if they have personally experienced them”.⁸⁹⁹

As part of cost-benefit analysis, some economists have also highlighted the issue of ‘*discount rates*’, i.e., “the rate at which future outcomes are devalued”.⁹⁰⁰ This notion usually refers to the human tendency to discount the future. This is an attribute possessed by people

⁸⁹⁶ Lawrence, “Opportunities for shaping individual behaviours,” 4.

⁸⁹⁷ Cornforth, “Behaviour Change,” 23.

⁸⁹⁸ See Angelo Panno et al., “Cognitive reappraisal and pro-environmental behavior: The role of global climate change perception,” *European Journal of Social Psychology* 45, Issue 7 (December 2015): 859, accessed January 8, 2015, DOI: 10.1002/ejsp.2162.

⁸⁹⁹ Cornforth, “Behaviour Change,” 26.

⁹⁰⁰ *Ibid.*

who, as Lawrence tells us, “prefer to take actions which confer lesser benefits now than those which give us greater benefits in the future”.⁹⁰¹ The *asymmetrical intertemporal discounting* of costs and benefits seems to bias people toward the present (i.e., the short-term). People take decisions that underestimate future benefits and overestimate future costs.⁹⁰² Thus, it is unlikely that people could make decisions in favour of enhancing long-term sustainable behaviour insofar as they over-value present benefits and under-value future benefits. For example, intertemporal discounting poses several problems when actions to mitigate and/or to adapt to climate change impacts are at stake. Generally, people refuse to take preventive actions because they prefer to avoid incurring immediate tangible costs rather than sacrificing immediate, tangible benefits. As already noted, empirical research has proved that “loss aversion”, i.e., the fact that people dislike losing something more than they like gaining it: (1) produces inertia; and (2) persuades people to oppose change. Moreover, these authors affirm that framing an issue appropriately can dissuade people from “undesirable” behaviour. Even if individuals are loss-averse, persuasive communication (e.g., framing information in terms of losses instead of gains; ordering choices so that benefits are considered before costs) is regarded as an optimal strategy to re-orient people’s decisions.

To conclude, it is true that, even though people might be profoundly concerned about the looming ecological crisis, they have scarcely been inclined to take personal actions to solve sustainability problems. Most people are not willing to act because they believe that their isolated actions are pointless. Thus it seems to me that both

⁹⁰¹ Lawrence, “Opportunities for shaping individual behaviours,” 10.

⁹⁰² “Of particular relevance is the fact that such discounting is greatest when the future is distant and uncertain and when intergenerational distribution is involved, as it is with climate change”. Ibid.

individual and collective action for sustainability presuppose the personal and social *internalisation* of ecological values, principles and norms through an adaptive ecological learning process, which in turn would encourage civil society's active participation in ecological/environmental struggles. Following Lawrence's line of argument, a more nuanced and holistic understanding of human behaviour is what allows us to conclude that "for civic tasks such as environmental protection, intrinsic motivation plays a critical role".⁹⁰³ In his view, the (re-)activation of the intrinsic motivational resources possessed by individuals and social groups is more advisable than the adoption of the language of burden and cost, which does not produce any positive results and is often counter-productive. Fines or monetary incentives are not as effective a deterrent as we imagine them to be. Individuals and communities can act as self-conscious moral-ethical agents promoting a real sustainable development model insofar as they can find good normative reasons for ecological action. Indeed, social movements for sustainability might be the new protagonists of this moral-ethical reawakening of citizens, which in turn would motivate them to think and act in a more sustainable way. This is also true for the social movements for sustainability operating in Arab-Muslim countries. The Arab-Muslim world has to face daunting ecological problems due, for example, to the negative impact of ecological degradation on human health, social security and economic stability, especially in the arid and semi-arid areas of the MENA region.

⁹⁰³ Lawrence, "Opportunities for shaping individual behaviours," 13–4.

5.1. Sustainability engagement and activism in Arab-Muslim contexts

The unexpected wave of political contestation and social mobilisation sparked across the Arab-Muslim countries after the popular uprisings of 2011 has compelled some political scientists to focus on “new social movements”⁹⁰⁴ — and notably on social movements for sustainability — as the main protagonists of contemporary socio-ecological transitions.⁹⁰⁵ Sandra Villumsen has defined social movements for sustainability as “Value-based Social Movements” (VSMs), i.e. dynamic and multi-dimensional movements “conducting defensive, non-strategic social action that are normally not recognized as having a transformative potential”.⁹⁰⁶ VSMs can be regarded as powerful social arrangements because they mobilise ordinary citizens to act on values that are important for both their individual and collective welfare. Thus, the specificity of these movements is that their adherents seem to endorse a set of *shared values*, which are then incorporated and realised in individual practices and social structures.⁹⁰⁷ It is also noteworthy that, whenever these “eco-citizens” try to pursue their “common good and interest” by finding strategies to face immediate ecological, social and economic problems in their everyday lives, they act, both consciously and unconsciously, in a sustainable way. Sometimes, indeed, they do not seem to consider sustainability as an intended social goal, but rather as a specific way of

⁹⁰⁴ See Alberto Melucci, “The Symbolic Challenge,” 789–90.

⁹⁰⁵ See Donatella Vincenti, “Sustainability transitions in Arab-Islamic countries: Egypt as a case study,” *Agriculture and Agricultural Science Procedia* 8 (2016): 135.

⁹⁰⁶ Sandra Villumsen, “Habermas in the Garden: Broadening the Scope of Social Movements for Sustainability” (MA Thesis, Lund University, 2012), 7, accessed May 8, 2015, http://www.lumes.lu.se/database/alumni/10.12/Thesis/Villumsen_Sandra_2012014.pdf.

⁹⁰⁷ Villumsen, “Habermas in the Garden,” 10.

being, thinking and acting in the private and public space.⁹⁰⁸ The strength of these VSMs simply resides in their participants' power to suggest a new meaning of what it is to live a sustainable life. In doing so, they actually craft and construct a "lived alternative" to the dominant "sustainable development" ideologies and theories. Their individual as well as collective actions and advocacy activities, which often draw on a wide range of sustainability narratives (i.e., value-laden stories about ecological care and respect), help them improve themselves, their respective communities and, most importantly, the Earth's health.

Moreover, it is important to stress that:

Contentious politics and its broad array of actors are setting the stage for sustainability transitions in Arab-Islamic countries (Beinin and Vairel 2011). The explosion and proliferation of social mobilization, although violently repressed by regimes and 'deep state' systems, have prompted the public to directly engage in many policy arenas — including environmental policy-making — formerly controlled by state and governmental authorities (Sowers 2013, 155). As a matter of fact, all "protests about environmental issues are also political and social claims about rights, access, livelihoods and power" (Sowers 2013, 1). In a context of serious environmental degradation, however, the public role of VSMs is becoming even more crucial because these movements *silently* engage in the collective fight against political and socio-economic injustices.⁹⁰⁹

Thus, it becomes apparent that this Arab "silent green revolution" is full of political implications. Still, it is far more important to observe and assess: (a) whether and how people's convictions, values and beliefs are expressed and framed in an ecological language, either during their public talk about sustainability-related issues or while performing daily-life ecological activities; and (b) to what extent such moral-ethical systems of value have inspired and motivated civil

⁹⁰⁸ See, for example, Paul B. Thompson, *Culture of the Land: Agrarian Vision – Sustainability and Environmental Ethics*, 1st edn. (Lexington, Kentucky: The University Press of Kentucky, 2010).

⁹⁰⁹ Vincenti, "Sustainability transitions in Arab-Islamic countries," 136.

engagement and collective action for sustainability in the context of contemporary Arab-Muslim societies.⁹¹⁰ Interestingly, the emotional content of people's speech is what can actually illuminate their own deep-seated ethics of sustainability.⁹¹¹

What follows is an introductory description of the four selected case studies (see Chapter 6), i.e., secular sustainability-oriented social movement organisations based in Morocco and Tunisia. These can be regarded as examples of VSMs. I chose two types of sustainability movements, that is, permaculture movements and eco-justice movements. Permaculture movements are pioneering in the field of agricultural sustainability because they use bioagricultural farming methods and practices in order to promote sustainable agricultural development and food security (especially at the local level). It is significant for this research that permaculture is also a spiritual movement with ethical-moral and social dimensions. Eco-justice movements, as described at length in Section I, are mainly focused on the defence of human rights in general, and on the protection of ecological and socio-economic rights in particular. Their justice orientation is particularly relevant here because it may relate to moral and ethical considerations. As will be illustrated in Chapter 6, these two categories of social movements will be used in the case studies included in the empirical study.

⁹¹⁰ See, for example, Benjamin R. Barber, *Strong Democracy: Participatory Politics for a New Age*, Twentieth-Anniversary Edition, With a New Preface (Oakland, CA: University of California Press, 2004).

⁹¹¹ Prugh, Costanza, and Daly, *Local Politics*, 114. See also Angelo Panno et al., "Cognitive reappraisal and pro-environmental behavior," 859.

5.2. Permaculture movements

Fazlun Khalid pointed out that we should “revert to small self-governing communities where power centres are visible and approachable; where people, instead of being controlled, have control over their own lives”.⁹¹² Permaculture (which is the shortened term for “permanent agriculture”) is an excellent example of a small-scale sustainable living system. This term was coined in the mid-1970s by two Australians, Bill Mollison and David Holmgren.⁹¹³ Even at that time, permaculture was not only conceived as a method for re-designing agricultural systems by modelling them on natural ecosystems, but as a valuable instrument for creating environmentally sustainable and socially responsible human habitats.⁹¹⁴ Generally, permaculturists point the finger at the environmentally, socially, and economically destructive impact of certain industrial agricultural practices (e.g., extensive use of pesticides, fertilisers, antibiotics, fossil-fuel use in agriculture, etc.) on both nature conservation efforts and human health/sustenance. Thus, their activities are meant to put peculiar emphasis on agroecology and “local food sovereignty” (i.e., the autonomous control over food production and consumption, especially at the local level). Indeed, the creation of locally-based ecological knowledge and, more importantly, of a self-constructed ecological identity is said to result from adaptive co-management of the environment and of natural resources (e.g., through self-sustaining farming). Such ecological legacy is socially transmitted from one individual to another and from one generation to the next. Permaculture

⁹¹² Khalid, “Islam, Ecology and the World Order,” 29.

⁹¹³ Bill Mollison and David Holmgren, *Permaculture One: A Perennial Agricultural System for Human Settlements* (Sisters Creek, Australia: Tagari Publications, 1978).

⁹¹⁴ See, for example, Patrick Whitefield, *Permaculture in a Nutshell* (Hampshire, UK: Permanent Publications, 2000 [1993]), 4–8.

movements can be usefully categorised as VSMs. They gather an array of people, such as farmers, ordinary citizens, professionals, etc., who form autonomous social structures aimed at rethinking lifestyles, symbols, and value base.⁹¹⁵ The leaders of these movements aptly call for an open and communal knowledge platform and engage people into tangible actions for sustainability. The unintended consequences of these processes of socio-ecological change, as Sandra Villumsen has rightly noted, are thus able to bring about long-enduring societal and economic transformations.⁹¹⁶ The two permaculture movements selected for the empirical study (see Chapter 6) are based in M----- (Morocco) and in T----- (Tunisia), respectively. They can be categorised as permaculture movements because their work is explicitly inspired by the founders of permaculture (Fukuoka, Mollison, Holmgren); consequently, these movements apply permaculture principles and processes to their farming activities and projects. They also train people on the use of permaculture design and planning, as well as on sustainable food production and distribution systems.

5.2.1. Morocco: Association 1

Association 1 is a Moroccan organic olive farm (6.5 hectares) and a permaculture research site. The small farm, which was founded in 2014, mainly produces cold pressed extra virgin olive oil and black olives, organic fruits and vegetables, animal products, as well as herbs, aromatic and medicinal plants. Throughout the year (and especially in spring/summer seasons) the regenerative design consultant and manager of *Association 1* along with his staff promote and organise organic food markets, Permaculture Design Courses (PDC),

⁹¹⁵ See, for example, Alan Scott, *Ideology and the New Social Movements* (London: Unwin Hyman, 1990).

⁹¹⁶ Villumsen, “Habermas in the Garden,” 10–11.

permaculture internships, and natural building workshops (e.g., adobe building workshops). Such activities are actually aimed at supporting and encouraging local farmers in particular and the Moroccan civil society in general to convert to organic agriculture, permaculture methods, and sustainable lifestyles.

5.2.2. Tunisia: Association 2

Association 2 is a non-profit association. Before its foundation, the core group opened a blog for sharing permaculture knowledge and nature-based experiences of sustainability (e.g., organic farming and forest gardening). Today, they also have an official website and a Facebook page. The association is chiefly aimed at promoting permaculture among local farmers in order to preserve ecosystem biodiversity and resilience, as well as the sustainable use of agricultural resources in Tunisia. It has contributed to the creation and development of a wide network of Tunisian farmers, growers, and permaculturists, who actually work in the various permaculture sites, forest gardens, and/or organic farms located all across the country. *Association 2* periodically organises workshops and festivals dedicated to preserving local seeds, soil conservation, permaculture ethics, sustainable cultivation of mushrooms, and so forth. In doing this, *Association 2* promotes permaculture as a means of increasing food sovereignty, reducing environmental impact, and fostering social cohesion at the local level.

5.3. Eco-justice movements

The other two case studies might somehow be categorised as eco-justice movements (though they do not explicitly identify themselves as such). *Association 3* has progressively extended its interests and activities to many specialised areas, such as organic agriculture, rural

youth educational and schooling programmes, women’s agricultural programmes, rural water access and management, multi-faith and interfaith agricultural projects, clean energy projects (e.g., biomass energy projects), and so on. We may categorise this as the *eco-justice* and human development approach because, as Richard R. Bohannon and Kevin J. O’Brien have noted, such category predicates that:

“all members of the community should have fair and equitable access to that community’s resources and participate in the community’s decision-making processes, and that special moral attention should be paid to the ‘least among us’, those who are poor or disadvantaged, and those who have been marginalized and oppressed”.⁹¹⁷

Association 4 is a network of Tunisian associations and NGOs that serves as a strategic hub to share ecological knowledge/expertise and to coordinate action on several projects in the domains of nature conservation, environmental protection, and human sustainable development. *Association 4* is also aimed at sensitising people (especially young people) toward eco-citizenship and environmental rights enforcement, as well as to foster respect for nature and the environment. Indeed, some of the member associations are chiefly devoted to the conservation and protection of species and natural ecosystems, while others focus more on sustainable urban development in Tunisia.

5.3.1. Morocco: Association 3

Association 3 is a Moroccan non-profit association. It overtly adopts a democratic/participatory human development approach. It promotes numerous sustainable development projects that draw on this peculiar approach, which intend to create a decentralised, flexible, and

⁹¹⁷ Richard R. Bohannon and Kevin J. O’Brien, “Environmental justice and eco-justice,” in *Grounding Religion: A Field Guide to the Study of Religion and Ecology*, eds. Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O’Brien (New York: Routledge, 2011), 163.

just socio-economic governance of natural resources and ecosystems. According to this perspective, networks of self-reliant individuals and autonomous local communities are asked (a) to identify their sustainability problems; (b) to manage their own projects, policies and initiatives in partnership with the public, private and civil sectors. In so doing, *Association 4* directly involves beneficiaries (e.g., farmers, groups of female workers, ordinary citizens, religious minorities and groups) in every step of the development process (ideation, elaboration, decision-making, implementation).

5.3.2. Tunisia: Association 4

Association 4 is an associational network composed of a group of Tunisian associations dealing with a broad range of sustainability issues affecting the country (pollution and waste, habitat and wildlife destruction, public good destruction, etc.). Some member associations are explicitly concerned with the conservation, protection, and management of species and natural ecosystems. Others have focused more on agri-urbanism and urban public space management (e.g., urban park protection and management). Recently, it has acted as a pressure group calling for the establishment, implementation, and enforcement of environmental legislation and policy-making in Tunisia; above all, *Association 4* is an interface between the Tunisian State/government and the local population when contention over sustainability problems arises.

Concluding remarks

Summing up, in Chapter 5 it is argued that appeals to fear and alarmist claims may frustrate people rather than stimulate ecological consciousness and action. In a recent paper, Shove asserts that, regrettably, environmental “policy is incapable of moving beyond the ABC — this being an account of social change in which “A” stands for “attitude”, “B” for “behaviour”, and “C” for “choice”.⁹¹⁸ She states that the so-called “ABC framework”, which is clearly related to the behaviour-change literature discussed earlier, is incapable of grasping the ongoing processes of socio-ecological change in contemporary societies. These dominant models of behavioural change presume that ecological behaviour is driven. As a consequence, contextual (e.g., cultural, social, political) factors are presented as largely conventional and, at worst, irrelevant to the comprehension of present-day sustainability mobilisation, activism, and advocacy.⁹¹⁹ On the contrary, it is perhaps more reasonable to note that the core eco-ethical values, principles, and norms endorsed by activists and participants in social movements for sustainability (here labelled as VSMs) might be crucial in the analysis of the motives behind both individual and collective action for sustainability. In my view, however, these moral-ethical aspects may be equally void unless we refer to the ways in which both single individuals and local communities (a) interpret and give meaning to their own reality; (b) configure their real needs and ideal aspirations; (c) concretely act for a sustainable change.⁹²⁰ The Arab-Muslim social

⁹¹⁸ Shove, “Beyond the ABC,” 1274.

⁹¹⁹ Shove, “Beyond the ABC,” 1275.

⁹²⁰ Shove presents two theories of social change that are reluctant to externalize social contexts and individual needs. The first theory, known as the “transitions-management literature”, is aimed at engendering radical socio-technical transitions for sustainability. According to this theory, the success of any radical societal innovation entails the development of a coevolving and vital system in which the continuous and irregular flow of interactions between its constitutive elements may:

movement organisations concerned with sustainability problems, such as the permaculture and eco-justice movements presented above, have actually encouraged civil society and some active citizens to be initiated and collectively participate in decision-making processes regarding human development and ecological enhancement. Thus, it is at the local level that sustainability can at first be best achieved. Further, the various social actors (notably activist leaders and high-level actors) engaged in these social movements for sustainability usually make extensive use of moral-ethical claims as framing techniques to mobilise their popular base. Hence, one of the main objectives of the empirical study that will be presented in the following chapter (Chapter 6) is to look at the motivational framing tools and strategies deployed by the various social actors involved in the four case studies mentioned earlier. Indeed, these secular organisations and associational networks, which are preoccupied with the search for sustainability, work to morally and ethically reawaken their respective constituencies in order to help them tackle present-day ecological challenges.

(1) erode the status quo; and (2) modify the existing “rules of the game”. The second theory mainly deals with social practices. Indeed, it is interested in the study of the creation, diffusion and circulation of fragile systems of individual as well as collective ecological practices, as well as in the careful analysis of their carriers (i.e. people, states, objects, etc.). This second perspective may be extremely helpful in the empirical analysis of social movements for sustainability in Arab-Islamic countries. See Shove, “Beyond the ABC,” 1277 ff.

6. The empirical study: frames and framing strategies

The present chapter intends to enquire into the moral-ethical aspects of sustainability engagement and activism in the aforementioned Moroccan and Tunisian organisations (see Chapter 5). As explained in the Introduction to Section III, social actors' narratives, myths, stories and storytelling may play a significant role in contemporary social movements for sustainability. This makes it relevant to conduct an empirical study into the oral narratives of personal and collective experience of sustainability which seem to characterise these types of social movements. In some cases, the moral-ethical message conveyed by such narratives, thanks to the use of *motivational framing* techniques and strategies on the part of engaged social actors (see Methodological outline), is able to successfully mobilise both individuals and groups around a common sustainability cause. Thus, sustainability narratives and their motivational frames can be seen as the locus of moral-ethical reasoning and decision-making with regard to several sustainability-related issues. For this reason, the main objective of the present empirical study is to identify and critically analyse the key motivational frames that are apparent in the sustainability narratives deployed by the high-level actors and participants in the selected Tunisian and Moroccan social movements for sustainability. Still, the research focus of this study remains on the moral-ethical content of such motivational frames.

6.1. Methodology and Procedure

I conducted a small-N, empirically-oriented, explorative and in-depth qualitative research. The primary macro-level unit of analysis is represented by the social movements for sustainability selected for this

study,⁹²¹ which are also referred to as Value-based Social Movements (VSMs) (cf. Chapter 5). This macro-level unit of analysis is illustrated through four case studies: two permaculture movements and two eco-justice movements, which are alternatively located in Tunisia and Morocco. The individuals (notably, thought leaders, active participants or casual participants) engaged in these four social movements are considered as the micro-level units of my empirical analysis.

Research Design and Method

This empirical research drew on qualitative research methodologies and explored contemporary phenomena, with the goal of answering the following two research questions:

- RQ3a: How do the social movement actors engaged in the Moroccan and Tunisian social movements for sustainability interpret, respond to, and find motives to tackle sustainability problems?
- RQ3b: How and to what extent is the “eco-Islamic” view stimulating new forms of self-governed collective engagement and action for sustainability in Morocco and Tunisia?

The surveyed phenomena are presented through the four selected case studies, namely two permaculture and two eco-justice movements (see Chapter 5). I chose Tunisia because it was the first country that went through the 2011 Arab revolts, calling for human freedom and dignity; furthermore, given the vital role of civil society in Tunisian politics and culture, especially after the 2011 Tunisian revolution

⁹²¹ According to Della Porta and Diani, a social movement can be defined as “a distinct social process, consisting of the mechanisms through which actors engaged in collective action: - Are involved in conflictual relations with clearly identified opponents; - Are linked by dense informal networks; - Share a distinct collective identity”. See Donatella Della Porta and Mario Diani, *Social Movements: An Introduction*, 2nd edn. (Oxford: Blackwell Publishing, 2006), 20.

(which led to the ousting of Ben Ali), Tunisia has seen enormous growth in (networks of) associations of environmental interest, as well as in social movements and non-governmental organisations concerned with sustainability-related issues. In Morocco, sustainable development is a national strategy that has been promoted and supported by His Majesty King Mohammed VI. Notwithstanding the popular demonstrations, protests, and rallies organized by the 20th February Movement in the period 2011–12, the reformist orientation of contemporary Moroccan politics has actually strengthened civil society.

As already stated, the main purpose of this study is to identify and analyse the motivational frames introduced and described by the interviewed thought leaders and participants while discussing their own experiences of social mobilisation and action for sustainability in Morocco and Tunisia. These motivational frames, it seems to me, are embedded in broader sustainability narratives or stories. Furthermore, this study investigates whether and how so-called ‘eco-Islamic logic’ appears in their personal/collective narratives of sustainability. In this empirical study, the triangulation of narrative analysis and frame analysis methods for social movement research was done by conducting fifteen in-depth semi-structured interviews and two focus groups. Since the overall research project deals with an under-researched field of study and has an overtly interpretive component, it maintains a close relationship with the empirical data collected through the fieldwork, which was conducted in the period from October 2015 to April 2016.

Case Study Methodology

Qualitative Case Study Methodology: case study selection

I have accurately selected a sample composed of four social movements for sustainability (two permaculture movements; two eco-

justice movements) that are distinctively operating in two Arab-Muslim countries (Morocco, Tunisia).

Data requirements and data collection method

Data collection and generation

I collected a vast array of data sources by using qualitative research triangulation methods. I used mixed methods in order to gather the following types of data: transcripts of in-depth semi-structured interviews (15 interviews: 1 *Association 1*; 3 *Association 2*; 6 *Association 3*; 5 *Association 4*), and transcripts of focus groups (2 focus groups: 1 *Association 2* and 1 *Association 4*), fieldnotes and memos, photographic images, video and audio materials, findings and reports from existing official documents (e.g., the Charter of the association, advertising materials, etc.).

Qualitative interviews – In-depth individual semi-structured interviews with key activists and participants based on interview guides were designed and developed. The interviews were conducted and recorded either on Skype/Pamela for Skype or by email, or during my field research trips to Morocco and Tunisia. Eligible participants were invited to participate in an interview either at a previously agreed time and location or at their own convenience. Before each individual interview started, I explained the main purposes of the study and obtained verbal informed consent. All interviews took place either in a private house or in a private setting. Key informants' interviews, which were conducted in their preferred language (French or English), lasted approximately forty-five minutes. An interview guide was developed to guide and stimulate discussion. The fundamental purpose of interviewing people by e-mail, Skype, or face-to-face was to collect personal accounts from the prominent activists and/or ordinary participants (e.g., farmers) in these social movements regarding the

motives that would guide their actions toward sustainability; at the same time, however, the focus was on the role ‘eco-Islamic logic’ could play in shaping their personal narratives on sustainability.

Focus groups – The two focus groups with *Association 2* (Tunisia) and *Association 4* (Tunisia) (5 participants and 4 participants, respectively), which lasted approximately one hour, increased my understanding of how activists (a) interact in public venues as opposed to one-to-one settings; (b) find common meaning in pursuing their sustainability ideals and goals; and (c) rearticulate their collective identity through public communication and social relations.

Fieldnotes and memoing – Original data were produced through field research — that is, short-term stays in Morocco and Tunisia. Undertaking fieldwork, which employs a broad range of data generation activities (e.g., participant observation, informal conversations and formal interviews), was an essential component of this exploratory study. Fieldnotes were made either after conducting interviews or during observations made in the field with the aim of: (a) recording events and activities; (b) providing meaningful accounts of individual and collective behaviours. In addition, memos were written throughout the whole research process. They helped me build confidence and intellectual assets by documenting decisions regarding the empirical analysis.

Sampling procedures

Both focus group and qualitative interview-based research were based on *purposive sampling*. The logic of selection responded to the need to identify individuals having a significant relation to the research topic. I chose interviewees who were considered to be either spokespersons/formal representatives of their respective organisations/associations or important figures who were directly

engaged in the social movement's activities and initiatives for sustainability. I did not distinguish between Arab and non-Arab activists (including Westerners and other non-native actors). I did not use formal selection criteria such as age, race, social class, income, ethnic background, social and political attitudes, and so forth. I selected activists and participants on the basis of their involvement in associational activities related to sustainability and nature conservation, and irrespective of their religious faith or background (e.g., Muslim/non-Muslim).

Transcription and translation of interviews and audio-visual materials

The transcription of the recorded semi-structured individual interviews and focus groups followed a set of systematic rules based on the available literature.⁹²² Before translating most of the selected interviews and focus groups from French into English, I transcribed both verbal and relevant nonverbal information, paying particular attention to timing and sequence of speech, and dialectal varieties (Moroccan and Tunisian dialects) in order to gather further details about the sensitive issues under investigation as well as to obtain clearly written information.

Conceptualisation, Coding and Categorising

The available qualitative data were analysed by referring to categories, sub-categories, and clusters, which I identified and formally represented through coding procedures. Narrative and thematic coding of the empirical data was an essential step of my analysis. I began the coding process of raw data by relying on line-by-line, segment-by-segment analysis of the qualitative data (transcripts of interviews and

⁹²² See, for example, Martyn Hammersley, *What is Qualitative Research?* London: Bloomsbury Academic, 2013.

focus groups, participant observation field notes, ethnographic data, e-mail correspondence, etc.) in order to assign labels (words or short phrases) to particular quotes and passages. Each unit of data was assigned a specific, unique code. The subsequent identification of recurrent patterns and themes, as well as the categorisation processes were in line with the methods of framing and narrative analysis. I used the core framing tasks (diagnostic, prognostic, and motivational framing) adopted in previous social movements research. I thus relied on these “theoretically deduced coding categories”, but the sub-variants of these framings were obtained inductively.⁹²³

6.2. Analysis of diagnostic, prognostic, and motivational framings

This paragraph is dedicated to the description and in-depth analysis of the main frames and framing strategies (i.e., of the core framing tasks: diagnostic, prognostic, and motivational) used and articulated by the different social movement actors engaged in the four selected social movements for sustainability. Thus, I will present evidence of diagnostic, prognostic, and motivational framing tasks, as shown by the excerpts from the individual and/or focus group interviews with the thought leaders, active members and community participants of each social movement.

6.2.1. ASSOCIATION 1

The taped interview transcript concerning *Association 1* provides evidence for the deployment of several framing strategies and techniques on the part of the selected informant (1 interviewee) while discussing sustainability matters and especially permaculture-related issues.

⁹²³ See Lindekilde, “Discourse and Frame Analysis,” 213.

6.2.1.1. *Diagnostic framing by Association 1*

In this Section, I report my findings on diagnostic framing by the interviewed member of *Association 1*. I actually found two main diagnostic frames, which I labelled respectively as the “debt-slavery” frame and the “tragedy of the commons” frame; I will discuss them here in detail.

The “debt-slavery” frame

While the interviewed member of *Association 1* was telling his/her personal story about how and why he/she started to be “ecologically-conscious” and to “go green”, he/she complained that the long-term repayment obligation for the loan he/she had obtained to secure a private property — i.e., to purchase his/her house or apartment — was unsustainable. Therefore, I have called this frame the “debt-slavery” frame. According to the interviewee, you become a slave because of the debt you have to repay, plus the interest you are charged. Permaculture, on the other hand, may free you from this sort of slavery. For example, you can learn how to build a house on your own, thus developing self-reliance skills that may empower you to overcome your financial dependence on lenders and to concretely promote a more sustainable economic-financial model of development.

“[...] because very early I saw in America that a house, which is something basic, you know, the medium home would cost 150.000 dollars, but you have to take a loan, then you have to pay through 30 years, and it comes to like 600,000 dollars that you have to pay. *So you’re basically slaving yourself, for something very simple that you could build probably in just two months, with the help of the community or something, you’re slaving yourself for 30 years, two jobs, just to pay it back.* That did not make sense to me, so I was looking for a way, and that’s where I have discovered permaculture.” (Individual interview, Association 1 member, October 11, 2015; emphasis added).

By emphasising that the repayment of a loan may force citizens (a) to be dependent on banks and creditors’ money for a long period of time; (b) to do an overwhelming amount of work in order to pay off the

debt, the interviewee also seemed to state that paying interest on loans should be regarded as partly unfair and unjust. He admitted that this is a kind of slavery that people should not be subjected to. This diagnostic framing may prove that sustainability problems are intertwined with the functioning of some economic and financial systems, which the respondent deemed as non-sustainable, at least in the long run.

The “tragedy of the commons” frame

Since the beginning of the above-mentioned interview, the selected interviewee summarised what I would refer to as the “tragedy of the commons” (cf. Chapter 3). The informant proposed a new regenerative system for the sustainable access, use, and management of communal (shared) resources. As illustration, he/she offered the following example of tree planting:

“So if you get some...well, the classic example is, of course, a tree, so if you gonna be using a tree to burn firewood, or whatever you gonna use it for, you need to be planting other trees, so you will never come to a point where you’ve cut all your trees and you’re left with nothing. *So you’re always regenerating that resource.*” (Individual interview, Association 1 member, October 11, 2015; emphasis added).

Another example he/she made was related to the community-based management of groundwater. Aquifer water was presented as a Common-Pool Resource (CPR):

“Even with water, you have a resource of water and you’re enjoying the right to have water. Just...for example, in our wells, we have two wells on our farm and, really, you try...*The well is the aquifer water and is the communal water, of the community, that could be used in a drought, it is the access where we restock the water.* If you have other ways that you could use, it would be better, so the well water is the last thing you wanna use, and that’s also entering to sustainability.” (Individual interview, Association 1 member, October 11, 2015; emphasis added).

Thus, the respondent claimed that the communal water supply (i.e., groundwater resources accessed through local water-wells), which

is mostly non-renewable, should be protected unless there is a very serious reason for extracting it (a severe drought, for example).

6.2.1.2. *Prognostic framing by Association 1*

Among the frames that I identified in the prognostic framing by the interviewed member of *Association 1*, I found the “self-sufficiency” frame, which is a response to the “debt slavery” frame presented above, and the “decentralisation” frame, which deserves special attention as well.

The “self-sufficiency” frame

The “self-sufficiency” frame used by the interviewed member of *Association 1* is evident, for example, from the following interview excerpt:

“[...] so I was really unhappy with academia, and the way they taught things, and I was looking for...really, *what I was looking for was a way to sustain myself*, basically, *taking care of the main human needs, like self-sufficiency, in terms of food, water, energy and shelter*, and that’s what I was looking for...so I was thinking to myself: if I had just those, I could just have my library and just spend my days studying, you know, without having to work two jobs, and all of that [...]”. (Individual interview, Association 1 member, October 11, 2015; emphasis added).

The use of this specific frame, it seems to me, was also aimed at outlining alternative approaches to globalised food production systems in general, and in particular to the extremely fragile food systems that dominate in hyper-urbanised countries. The informant explained that the feeling of self-sufficiency you get when you practice permaculture or when you grow your own food in a small space may help people promote grassroots green initiatives. For example, community gardens, which are often located in shared open spaces, are community-owned (rural/urban) allotments where people grow fresh fruits and vegetables. For the selected interviewee, community garden programmes are socially-just, economically-viable, and ecologically sustainable:

“[...] Well, that’s another system, that kind of...right from the start, it’s an unsustainable model of operation, the way cities operate, where they do not have their own production methods in terms of food; it’s just a very crowded and centralised kind of environment which makes people aggressive and competitive, and it’s a lifestyle that requires a lot of energy, so you have to transport all these things into it. The buildings are also emitting a lot of carbon dioxide, I think like more than 40% of carbon emissions are just caused by buildings themselves, the roads, the asphalts, you know, is preventing water-soaking into the ground and many, many problems like...you have waste problems, so I think that we also have to rethink our cities and design them in an environmental way and also the social structures within them are just..., *they have to be remade, I think, looking more into solutions like community gardens, having in every small neighbourhood a green space for children, for people growing food that they could all do it together and bring people together in a communal fashion, that helps them create bonds between them and feeds them as well, so that is more of a social system that works.*” (Individual interview, Association 1 member, October 11, 2015; emphasis added).

According to the same interviewee, learning how to build houses, harvest water, and manage energy sources in economically feasible and environmentally safe ways, as well as knowing how to grow your own food — that is, getting what I would call “food sovereignty” through sustainable agriculture — are the necessary steps to ensure self-sufficiency. Looking back at the starting point of this Moroccan eco-project (i.e., *Association 1*), he/she stated:

“[...] when I came back to Morocco in ----, *I was looking for opportunities to learn these skills. They all have to do with self-sufficiency, so, how to build your own house, how to harvest water, energy, and grow your own food.* These are the main things, and I couldn’t find anything, really. That’s why I had to travel overseas [...]. I finally had enough skills and self-confidence to start the project. So I came right back in April ---- and we started doing courses. The concept of Association 1 was that instead of me going internationally, having to travel, paying for airfare, and paying for these trainings, I wanted to bring experts here, so I could benefit, and bring, you know, a group of people that could also take the course, that they also needed, they need somebody to, you know, organise these kind of things, they do not have to travel, and the course would also benefit the project itself. And that’s why so far we did four courses, so, two permaculture design courses, one permaculture internship, for three weeks, and the last course was natural building, so how to build your own house. I also wanna do other things, like biogas, and all these things that have to do with either energy, or food, or shelter and *I wanna teach people these things, to me...* I want Association 1 to have an example, *the best example* of all these different

areas, so people can come and learn, and build self-sufficiency in their own communities. That doesn't take two jobs, and so much money to buy a house, to make it in life." (Individual interview, Association 1 member, October 11, 2015; emphasis added)

The "decentralisation" frame

The respondent associated the way in which eco-villages function (e.g., sharing resources, fostering cooperation among farmers and other residents in order to increase local communities' self-sufficiency, autonomy and, consequently, economic strength) with the adoption of decentralised models of State and economic administration. Decentralisation, in this case, is based on the transfer of decision-making powers and responsibilities from State-actors to non-State organised actors (e.g., community members such as local farmers' cooperatives) with regard to agricultural food production and distribution:

"Decentralise these communities, so that they no longer rely on the State to provide them with water, and electricity and food, and they're very resilient, grassroots-organised, self-reliant communities that have economic strength as well. So, once you get those four basics, the four basic elements done, then you start talking about social organisation, and cooperatives, and economic strength." (Individual interview, Association 1 member, October 11, 2015; emphasis added).

In another passage, the respondent added that:

"[...] talking about permaculture for farmers, it could really have an impact on the community. If I teach them this... If I simplify permaculture and basically teach them how to do these things, how they could save water, and save their money, that they spend on fertilisers and all these things; and that's just in terms of farming, but also I want to work with them to organise some kind of cooperatives, to sell their products, but not only cooperatives, but even food processing. So, a lot of them, they produce milk, that they sell for like, you know, it's four dirham, which is like forty cents per litre, but if they learn how to make cheese, or how to process their particular food... We've just built a store, like a health food store in Association 1, where we're gonna be selling our products, but also the community's products, and they can get a lot more money for their products, and that gives them economic power as well, instead of just going through middle-men and selling their milk to the government and to big companies, which don't give them much money." (Individual interview, Association 1 member, October 11, 2015; emphasis added).

Here the respondent seemed to contend that such decentralisation efforts might lead, for example, to the establishment of local farmer cooperatives, which would be able to autonomously produce and sell their own agricultural products at a fairer and higher price by bypassing either the usual intermediaries, or the “predatory” global food markets.

6.2.1.3. *Motivational framing by Association 1*

By analysing the motivational language used by the interviewed member of *Association 1* in relation to permaculture engagement and activism, I detected three main motivational frames: the “contract” frame, which was somehow influenced by his/her references to Native American spirituality; the “spiritual refinement” frame, which was directly inspired by the permaculture philosophy of Masanobu Fukuoka, a Japanese microbiologist and farmer well known as the “trailblazer” of permaculture; and, finally, what I have called the “Imam’s eco-sermon” frame, which reveals the presence of frame extension techniques (see Methodological Outline).

The “contract” frame

When describing what “the act of receiving and giving back to nature” really meant to him/her, the respondent declared:

“[...] the Native American spirituality, which I was exposed to also in the U.S., taught me this, because the natives have this deep connection. When they took salmon from the river, they say that they’re entering into this contract with the resource, and it’s a contract that ‘now I took this, but now I am responsible for sustaining the species. I am the solely responsible for helping the species survive’; and if we looked at things in this way, we would become very careful with the things we do.”
(Individual interview, Association 1 member, October 11, 2015; emphasis added)

This motivational frame was used by the selected informant, it seems to me, to express the idea that natural resources ought to be sustained and protected because humanity “signed a contract” with nature. He/she seemed to claim that such contract entails a moral-ethical

responsibility to conserve and regenerate the Earth's resources. Interestingly, the informant was inspired by Native American spirituality, i.e., the Native American "nature religion" he/she (re-)discovered in the United States. According to the selected interviewee, Native Americans' deep ties with nature (and especially with American lands) invites all human beings to live in harmony with nature and to be careful in their own actions toward nature and natural ecosystems. Thus, the awareness that we, human beings, have signed a contract with nature may motivate people across the world to engage in sustainable living and to take action for protecting the natural environment.

The "spiritual refinement" frame

This second motivational frame, which is actually linked to the previous one, contains the basic values and principles embraced by several permaculture designers and activists. Spiritual refinement is regarded as one of the most important motivational drivers of sustainability engagement and action:

"Well, of course, it's what drives me. I would...I mean, to me, spirituality is anything has to do with the heart, with the intuition, with the sensitivity, and in this kind of work it's really the core values of spiritual refinement. A quote from Fukuoka, a Japanese farmer, comes to mind, when he says: 'people think that we're doing agriculture, people think that we're cultivating crops, but what we're really doing is refining human beings'. So it's a deeply spiritual thing. You could be planting potatoes, but it's actually a deeply spiritual practice, because you've been sensitive, you've been present in the moment, you're doing it with love, and awareness; and you're doing something that's very powerful, that requires a prayer for it to grow, so that water would come, so it's also very humbling, and all these are qualities that I observe in my spiritual practice; and by doing farming I feel that I am also improving as a human being spiritually." (Individual interview, Association 1 member, October 11, 2015; emphasis added)

The selected interviewee seemed to argue that permaculture is a privileged path toward spiritual refinement and self-realisation. Quoting Fukuoka, the informant explained that human spirituality expresses itself through a loving action toward nature ("heart"), an

instinctive reasoning and awareness (“intuition”), as well as through a constant appreciation of the other’s feelings (“sensitivity”). Here the respondent explicitly used, for example, the words “prayer” and “humbling”, which both hint at a religious-resembling terminology.

The “Imam’s eco-sermon” frame

This motivational frame articulates the potential motivational role played by the Islamic ecological teachings contained, for example, in some Quranic verses. As noted by the selected interviewee, people might benefit from what I have called ‘eco-sermons’, i.e., sermons given by Islamic religious authorities in local mosques. The informant mentioned an imam who was invited by the members of *Association I* in order to illustrate the main “eco-Islamic” tenets to a group of Moroccan farmers. The respondent acknowledged the authoritative role of imams in reaching a wider audience and in convincing local farmers to abandon selfish profit-making motives leading to unsustainable agricultural practices. Thus, according to the respondent, this might be another possible option to “convert” local farmers to more ecologically-sustainable agricultural methods and techniques:

“People just go with whatever makes them money, they’re not very aware of these issues, I think the only way or...one of the most powerful ways you could reach them is either through the imams, which talk at the mosques, if they do some kind of sermons about stop using these chemicals because in the Quran it says you shouldn’t do this, you shouldn’t do that, so either through a religious kind of authority, or if you really have a demonstration site where you really compare results, and that’s kind of what I wanna do, and you show them that you could get really good yield with less money, which means with less inputs, and sell it for a higher price hopefully. That’s the only way they can really become convinced of doing that.” (Individual interview, Association I member, October 11, 2015; emphasis added)

As the respondent continued his talk, he/she said:

“Interviewer (I): so you’re following the second path, together with them.

Respondent (R): Yes. [pause] Well, I am also... it also helps to use the first path as well, *maybe quote some religious passages, because they could really relate to that, and they respect that, and they would listen to you.* [pause] *And that's what I usually do also. It's like God doesn't want us to do this, God doesn't want us to be wasteful, you just bring some particular verses that have to deal to that particular topic.*

I: And did it happen to you...to mention them?

R: Yes, absolutely, yes, yeah.

I: Is it also part of the everyday interaction when you are in the field or, do you mean, during training sessions, or something like that?

Respondent: *No. During training sessions as well, during our first PDC [Permaculture Design Course] the teacher was a convert to Islam, he was a ---- gentlemen, and he pretty much would start every lesson or course, every morning, by a quote from the Quran that had to do with that particular...theme that we were discussing. And he would relate them into verses; that was very interesting to see.*" (Individual interview, Association 1 member, October 11, 2015; emphasis added)

It is important to note that some “eco-Islamic” teachings have been used in PDC training sessions; however, according to the interviewee, these religious teachings do not enter the everyday interactions among farmers working in the field. This might suggest that the use of “eco-Islamic” motives has to be restricted to specific educational/training settings.

Further, by referring, for example, to imams and Islamic aid organisations as potential strategic actors for permaculture recruitment purposes, the informant stated:

“[...] Actually, I also wanna know the imams, so you could...so that the imams also know you, so you could influence them to talk to people and reach a bigger audience by preaching to people ecological principles, and things like that; but, you know, I was offered an opportunity also to work with this beautiful ---- Islamic Foundation-organisation called ---- . They start a chapter in your country and you start doing relief work and permaculture aid work, they're very much into permaculture and ecology. You should check them out. It's called Muslim Aid Australia.” (Individual interview, Association 1 member, October 11, 2015; emphasis added)

His argument indicates that the local imam may act as what I would call a “strategic mediator” between permaculture designers and local farmers. Thus, the imam’s “eco-sermons” may motivate people to join the permaculture cause. In my view, this appears to be a *frame extension* technique, which is directed at recruiting, incorporating, and engaging new participants (e.g., local Muslim farmers) by anchoring ‘secular’ permaculture principles to a set of “eco-Islamic” values and beliefs.

6.2.2. ASSOCIATION 2

In this Section, I identify the diagnostic framings undertaken by *Association 2*. I then present the prognostic framings through which *Association 2*’s thought leaders and participants have offered solutions to the sustainability problems articulated in the diagnostic framings. Finally, the analysis of the three individual in-depth semi-structured interviews and of the focus group interviews conducted with both high-level actors and members of *Association 2* provides evidence for the use of motivational framing strategies.

6.2.2.1. Diagnostic framing by Association 2

The diagnostic framing techniques used by the selected interviewees to introduce and discuss their sustainability challenges revolve around the themes of (1) the so-called “human dominion over nature”; and (2) the economy and politics of contemporary capitalism, which are both seen as ecologically unsustainable and socially-economically unjust views. I identified two diagnostic frames, which I would call the “excessive consumption and production” frame and the “lack of socio-economic dignity” frame.

The “excessive consumption and production” frame

The diagnostic framing by one of the members of *Association 2* seems to express the idea that the current capitalistic mode of

production and consumption — which has fostered the unlimited extraction and excessive use of non-renewable natural resources (e.g., oil and gas) — is ecologically destructive and, consequently, is a crime threatening the entire humanity. The same respondent declared that the current patterns of human production and consumption are to be considered among the major causes of ecological degradation and unsustainable human development. In his/her view, maintaining high rates of consumption may outstrip the capacity of the natural ecosystems to sustain us and the planet:

“[...] many people have already become aware of the fact that we have exceeded too much. *Our consumption exceeds a lot what the resources of the Earth could sustain.*” (Individual interview, Association 2 member #1, October 19, 2015; emphasis added)

Similarly, he/she added:

“If we calculated what we consume, [...] *we would need almost two planets to allow us to live at the consumption level we have today.* Things are not going well because resources do not follow the rhythm of our consumption. *Our consumption is overwhelming, it goes far beyond the Earth’s carrying capacity.*” (Individual interview, Association 2 member #1, October 19, 2015; emphasis added)

Thus, capitalists (and, more specifically, what he/she referred to as “capitalistic greed”) are to be blamed for the destruction of nature and, above all, for the uninterrupted depletion and degradation of natural resources:

“[...] *the capitalistic greed and the mode of capitalist development based on profit have committed crimes against humanity.*” (Individual interview, Association 2 member #1, October 19, 2015; emphasis added)

“In my view, *it is the greediness and selfishness of humans that lies behind all this, it is the model of capitalist reproduction that has caused all this.* Before, we had other modes of production, such as the slavery production system, the feudal system; but that one is really catastrophic. They want to develop all, they develop means of production to dominate nature, when it is not what we need for ourselves. We do not have to dominate nature, we have to be an integral part of nature, if we dominate nature, it won’t benefit us. Once we have destroyed all, what will we do?”

(Individual interview, Association 2 member #1, October 19, 2015; emphasis added)

Further, the same respondent observed that if profit-making (i.e., profit-maximization) continues to be the sole purpose of any human economic activity, nature and the environment will rapidly be degraded. He/she took the millennial tree as an example of what has been called the “commodification of nature” (cf. Chapter 3) — i.e., the transformation of natural elements into mere commodities to be traded on (global) markets:

“[...] this is the problem, there are [people] who are only preoccupied with making profit. Yesterday I took the example of that tree, which is 43,000 years old. Capitalists transform them [i.e., trees] directly into dollars. They don't see anything else, they don't care of its history, of the knowledge contained into that tree, of its importance, etc., of the knowledge contained into that tree. It has survived 43,000 years, so it can give us a lot of benefits; it shows us how to live for 43,000 years. For them, all this is not relevant, they don't care of that at all.” (Individual interview, Association 2 member #1, October 19, 2015; emphasis added).

Another respondent argued that the savage consumerism induced by the advertisement of commercial products plays a large role in encouraging an ecologically unsustainable mentality in Tunisia:

“So for me, anyway, right now we have to change the way we are producing, because right now it is a very exploitative way concerning the nature and concerning people, but we all want to buy everything cheap. I think we have to change this way of thinking as well, you can't have everything very cheap and at the same time you have something qualitative and that's why we have to work on the mentality of people as well. We have to see that good quality has its price, but the problem today is the advertisement because we all, we want to consume, we are in a world where we are forced to consume more and more, we are consuming much more than when I was a child. Twenty-thirty years ago, we were consuming much less, and at that time we already had to work, we had to save resources; but the problem now is advertisement because we are surrounded by advertisement, and this is something you can only fight against if you're sensitising people, especially sensitising young people, because otherwise, the circle of consuming and exploiting is going to continue forever and this everywhere.” (Individual interview, Association 2 member #2, October 18, 2015; emphasis added)

This hyper-consumerism, as stated by the same respondent, is a sustainability problem that afflicts, above all, Tunisia's young people. The country is flooded with cheap imported products, thus creating the need for the uncontrolled consumption of goods. Additionally, as stated by the informant, young generations increasingly feel the desire to buy and consume foreign products:

"[...] Tunisia was flooded by products from abroad, and I see that, especially the young generation here, are consuming without thinking. I mean, they have more smartphones than they have in Europe, they eat fast food every day, they are really huge consumers of products which, for me, don't have any sense; and this is what shocked me a little bit, because I think that the youth is our future, and I have the impression that they are influenced, the influence of media is very, very strong here [...]. I really want to say that Tunisia is doing like Europe today, but not in a good way from the point of view of consumerism." (Individual interview, Association 2 member #2, October 18, 2015; emphasis added)

The "lack of socio-economic dignity" frame

During the focus group discussion, one of the respondents said, in reference to the socio-economic and ecological situation in today's Tunisia:

"[...] there is a lot of poverty and high unemployment levels. Thus, for me, it is important to solve these problems, such as unemployment, the problem of giving a job to everybody and of ensuring proper education, health services and facilities to people, etc. [...]. The purpose of permaculture is also to realise that we have to take care of humans [...]."

"[...] the first thing that worries me has to do with the socio-economic conditions of society, as well as with unemployment, poverty...this is the first thing to address. Further, and this corresponds to the second objective of permaculture (that is, taking care of the land), I am interested in the environment, and the environment suffers from soil erosion and desertification, which are increasing at a high rate [...]." (Focus group interview, Association 2 member #1, December 23, 2015; emphasis added)

Poverty and unemployment were presented as sustainability-related problems because they deeply affect the socio-economic integrity and political stability of the national community. In addition, soil erosion and desertification were considered as the two most

significant environmental problems the country is facing. The same respondent continued his/her argumentation by saying:

“[...] what worries me is that now there are social injustices; we need a development based on more social justice [...].” (Focus group interview, Association 2 member #1, December 23, 2015; emphasis added)

Here it is also important to stress that, as pointed out by another of the selected interviewees during an individual interview, ecology, economy and social development ought to work together in order to effectively realise sustainability objectives:

“I don’t like that sometimes ecology and economy, they are treated like things which can’t work together.” (Individual interview, Association 2 member #2, October 18, 2015; emphasis added)

In addition, during the focus group discussion one of the participants claimed that State-governmental actors have not been sufficiently responsive to environmental/sustainability actions and policies:

“[...] often these problems are related to a bad conception of the State, i.e., there is neither reflection on this, nor a plan for realising a sustainable development in Tunisia; but they are also related to the disappearance of traditional agricultural practices and techniques [...]. I think that, to some degree, this is the inheritance of the period of ----, when traditional practices were dismissed. Now we have only modern practices that are not so sustainable in the long run; today, however, we are going back to the past to find solutions for the future [...].” (Focus group interview, Association 2 member #3, December 23, 2015; emphasis added)

Indeed, this respondent seemed to call for the recovery of traditional ecological knowledge and ancient agricultural practices as the basis for the transition to a sustainable agricultural system in Tunisia and in the rest of the world.

6.2.2.2. *Prognostic framing by Association 2*

Through prognostic framing, which is evidently related to the diagnostic framings presented earlier, many of the selected respondents

depicted the whole method-conception of permaculture as a sound response to the threat of “capitalistic greed”, whose basic principles have justified and boosted the unconstrained exploitation of natural resources (e.g., hydrocarbon exploitation).

The “alternative to global market capitalism” frame

One of the respondents asserted that permaculture may offer people an opportunity to solve some of the sustainability problems that have occurred as a result of what I would call the “hyper-capitalist faith”. In an individual interview, he/she reflected on this:

“Thus, we have to change our way of consumption, production and of seeing things. We have to get another vision of things; we have to consider ourselves as part of nature, limit our consumption, live in harmony with nature, etc. Permaculture is there to respond to that, indeed, it emerged as a response to these problems of soil erosion, excess of consumption, [...]. It gives another perspective on things.” (Individual interview, Association 2 member #1, October 19, 2015; emphasis added)

Likewise, during the focus group discussion, one of the respondents overtly stated:

“I see sustainability as a social and economic model. It would be more just among people, and more fair with nature and the resources we have [...].” (Focus group interview, Association 2 member #3, December 23, 2015; emphasis added)

Thus, according to the above-quoted interviewee, whenever people pursue sustainability through permaculture activities, they are actually forging a new model of human development which is socially/economically just and fair toward nature and natural resources.

In an individual interview, the selected interviewee said:

“For me, ecology and economy can work very well together. You just have to change the way you're seeing economy, and you can create so many jobs, for example, in the green economy, in renewable energies, or organic farming. In organic farming you need many more workers than in the conventional farming; for example, you can create new jobs in the ecological field, and the life quality improves if your health quality improves, if you breath clean air. So, if you work in the field of sustainability, I mean, sustainable development [...], ecology, economy

and the social aspect are combined. It doesn't mean that the ecological, the economic or the social aspect is excluded, but it means that you can have a healthy and high quality of life without exploiting your environment; so this is really, this is something everywhere in the world. It is wrongly considered that economy, ecology don't work together, but it's not the case." (Individual interview, Association 2 member #2, October 18, 2015; emphasis added)

The last statement, it seems to me, implies that any individual as well as collective commitment to sustainable development (as expressed, for example, through organic farming and bio-agriculture) is a social process that takes into account ecological, economic, and social factors. Indeed, these three interrelated aspects concur with each other to the same end.

The "working with nature" frame

Among the available respondents, there was one who presented permaculture as a way of seeing things, i.e., as a method-conception that ensures ecological sustainability by imitating the practices of nature itself. Human beings in general and permaculturists in particular are thus asked to follow nature's closed-cycle of generation and decay:

"Nature does only sustainable things, or transformable [things]. *Nature is able to create life from life.* All things die and that is the departure point for another life. *All recycles itself*; consequently, if there is a closed circle, [...], everything is transformed, nothing is wasted there. When tree leaves fall down they are degraded by the mushrooms, etc., they die and they transform themselves into organic matter for trees, so this is the closing phase." (Individual interview, Association 2 member #1, October 19, 2015; emphasis added)

The same respondent quoted Fukuoka in order to explain his idea of permaculture as a path toward human transformation and ecological learning by living in contact with nature:

"As well, this is *the fundamental idea of Fukuoka who said that the essential thing was to work with nature, not against her.* Thus, we have to go towards her direction, not contrary to her, not in the opposite direction, but [we have to go] towards transformation. *It is a beneficial transformation*; it has changed me a lot." (Individual interview, Association 2 member #1, October 19, 2015; emphasis added).

Permaculture was therefore regarded as a holistic worldview which could help local people construct sustainable ways of living for the benefit of their own community. As stated by the respondent:

“Thus, this is my transformation, I feel much better, *I feel in complete harmony with nature, with animals and with all its components.*” (Individual interview, Association 2 member #1, October 19, 2015; emphasis added)

Likewise, another interviewed member of *Association 2*, when asked to describe what sustainability had meant to him/her personally, said:

“*For me, it's living with nature and not against nature. Not exploiting the nature, this is sustainability for me [...].*” (Individual interview, Association 2 member #2, October 18, 2015; emphasis added)

Another *Association 2* focus group participant added elsewhere that:

[...] *now I can say that, and defend that strongly: work with nature and not against nature. I have always tried to understand how to use the abundant plants that exist in Tunisia; there are good things in all plants, which exist in abundance.*” (Focus group interview, Association 2 member #4, December 23, 2015; emphasis added)

Summing up, the above-mentioned interviewees stressed the importance of “working with nature and not against it”, which I would consider as an “ecological motto”.

The “food sovereignty” frame

Association 2, it seems to me, is deeply concerned with food sovereignty, which can be attained, for example, through organic farming methods. One of the selected respondents also affirmed that the agro-ecological approach (which generally opposes intensive agricultural systems) supports the protection of local seeds. This specific approach would ensure, on the one hand, ecological

biodiversity and, on the other, would guarantee food sovereignty to farmers and to all people living in both rural and urban areas.

Thus, according to one of the respondents, safeguarding seeds is crucial in this respect:

“[seeds] are something very important, *they are at the basis of our sovereignty, they are the basis of feeding, seeds are not here for nothing.*”

[...]

“In his book, Fukuoka told that the ideal thing for him would be to have...Today, in some countries, we have about the 3per cent or 4 per cent of the population that practices agriculture, but for Fukuoka the ideal would be to have the 100 per cent of the society practicing agriculture. It would not be a full-time job. Short-time workers and civil servants would find free time in the afternoon and during the weekend. It is important to be in contact with the soil, to see the roots under the soil; we cannot see the roots under the soil, such as those of trees and plants, without touching them, without practicing, without planting. It is very important for me because I feel that [...] *when I come here for example, and I look at the seeds that I sowed a few days before [and I see that] after two-three days they grow, etc. This is very important, when I see them evolving, if they are attacked, no problem, they will defend themselves; it is important to see how, starting from nothing, indeed, it is not nothing, they are seeds, how starting from something that, a priori, is ordinary, etc., I come to see a tree that will be fifteen-twenty metres high, that's magic!*” (Individual interview, Association 2 member #1, October 19, 2015; emphasis added)

According to this respondent, observing seeds and seeing how each little seed grows and progresses is a simple activity that celebrates the miracle of nature but, at the same time, is an effective strategy to reach food sovereignty at the local level.

The “community-based cooperation” frame

One of the selected interviewees contended that the cooperative aspects of nature ought to be emulated in order to foster cooperation among the permaculture associations concerned with sustainability-related issues:

“[...] we have tried to cooperate with other associations; this is very important because *our work is entirely based on cooperation.* We have learnt to do the opposite, that is, to follow a model that is based above all

on the fight for survival, but that's not true [...]. Indeed, there are two paths, there is the fight for survival and for conquest, and there is cooperation. [...] *Instead of working with the muscles of the work, we work with information, intelligence and human mind; we use human intelligence to conceive systems that cooperate* and this is the same thing we want to do with the associations [...]. We try to make them cooperate because, of course, there are goals that one association alone cannot fulfil, so we need many associations. *The more numerous we are, the better is for us. There is a saying here, an African proverb, whose essential part, which is really interesting, tells that: 'we cannot go fast if we are alone, but if we go together, we can go very far'.* Thus, we chose to walk together, because we want to go very far, so the isolationist conception is not the only one available to us. *As permaculturists, we work together, we are open to all people who are respectful of nature.* Thus, we are interested in agro-ecological associations, as well as in ecological, environmental and biodynamic associations, and we will find ways to collaborate together. Yes, this is at the image of nature.” (Individual interview, Association 2 member #1, October 19, 2015; emphasis added)

According to another respondent, the collaborative efforts that have been made by Tunisian civil society have contributed, for example, to the creation of new community-based ecological spaces and initiatives (e.g., community gardens):

“There is money in this country, but it has to be directed in the right way; but as I said, we are just five years after the Revolution, we can't expect miracles, but *I think that civil society is developing slowly and they're just searching their way, and they have to just to find the right partners, and things are going to become more concrete;* but I've seen, since I'm here, that a lot of little projects have taken place in the ecological field. *We have to start small, with my community gardens we started with five gardens in Tunis, and I would like to have all Tunisia covered with community gardens and afterwards all Tunisia, why not? It is a great project in order to involve people for the environment and for the community.*” (Individual interview, Association 2 member #2, October 18, 2015; emphasis added)

The same respondent argued that the Tunisian civil society can actually influence politics and policy-makers when sustainability problems are at stake:

“I also want to stay because I think that things will go on the right direction; and I'm happy that I'm here because *I think that now it's the right moment to be active and even to influence the direction of policy-makers, because policy is now made by civil society.* It has influenced a lot, however, I mean, *you should never underestimate the civil society.*”

(Individual interview, Association 2 member #2, October 18, 2015; emphasis added)

Further, the interviewee explained that appropriate solutions to sustainability problems can be found when people come together and share their own ecological ideas and values. Hence, permaculture activism can be an important way of achieving this and, above all, of participating in social mobilisation for sustainability and eco-justice:

“I think that permaculture is a great chance, especially for farmers, to get an orientation, to be productive and ecological at the same time. I’ve seen, for example, today for our event about the promotion of traditional seeds in Tunisia, it’s so many people from many places, normal people, associations, they came here to join and they’re really interested in the topic, these things show me that there is interest; but people have to know more, they have to get together and to really know what is the problem about and really find solutions; because they know their problems, but they don’t find solutions easily, and this is one thing [...]. I have to continue to work in the field of...in the ecological field and there are always some projects which arrives from some moment and there is always someone that come with ideas, so much to do, and this is what I see, there are people...they just have to gather, they just have to know who is doing what, where to find information and I think then it is a good way to have a more sustainable development here in Tunisia.” (Individual interview, Association 2 member #2, October 18, 2015; emphasis added)

In the focus group discussion, one of the respondents, while talking about a similar topic, said:

“what attracted me more in the permaculture is above all the aspect of social organisation, as well as the adoption of this model of organisation and community-based decision-making [...].”

[...]

“we have to re-localise both production and decision-making, it can be applied at all scales [...].” (Focus group interview, Association 2 member #5, December 23, 2015; emphasis added)

Following this respondent’s line of argument, when people start to organise themselves for collective endeavours and formulate their locally-based interests, they can take decisions to change both the socio-economic and ecological situation afflicting them.

The “youth education” frame

According to one of the interviewees, younger generations, and especially children, can be easily sensitised to ecological respect through the school system:

“[...] I think with adults it is much, much harder to convince them, just from the material point of view, it is working, but I prefer actually work with children and maybe teenagers, but especially children, because children are very open; and with these community gardens, as I’ve just told you, we really wanted to involve children, especially kindergartens (primary school, first year) because the age, three-four, six-seven years, when children are very captive and they are changing their mindset easily, and they’re very open to new ideas, and you can fascinate them for nature; you can see it in the kindergarten at primary school, children are very happy to deal with nature, you just have to get them into contact.” (Individual interview, Association 2 member #2, October 18, 2015; emphasis added)

Similarly, during the focus group discussion, one of the participants explained at length that *Association 2* has supported and is willing to launch more ecological education programmes and projects for young people. According to the same respondent, gardening knowledge and its related activities, for example, may help develop a certain level of food autonomy among young citizens as well as among their respective families/communities:

“For what concerns the approach we adopt towards youth, it should be reminded that our association is very young. It exists since a few years now. We are figuring out a plan to launch schools of agriculture in which we can sensitise young people, young engineers, agronomists and technicians to permaculture by working on nearby permaculture [...]. Thus, this is the approach we planned to sensitise young people. Personally, [...] I hire and train many young people in the nearby environment, and it is getting bigger, to cultivate vegetables in their own house, to cultivate their own small garden in a family-based and friendly environment, and it’s getting bigger and bigger. I sensitise people to cultivate some vegetables in their house; even if you don’t have a garden, use the balcony, the terrace, put plants in vases, and have a certain degree of autonomy [...]. I found a really interested and interesting reaction on the part of young people and their families. Current generations are actually very encouraging, and I see more and more families which first put some vegetables in the nearby environment, and then extend their spaces for planting, as I told you. There are also...of course, we can do a lot in this field, actions of this kind that can reach not only young

people, but also families in general, and households, and that can give them the chance to plant their own vegetables, each in their own house, that is, initiatives such as planting, and sowing seeds, with no hesitation to do it [...].” (Focus group interview, Association 2 member #4, December 23, 2015; emphasis added)

The same respondent, while talking about the Tunisian youths, declared that:

“[...] in Tunisia, young people are thought to survive instead of taking charge of their future. We have to change the educational spirit of the last ten years in order to make the engine works. We get a degree to get a job, not to be creative and propose new initiatives. Decentralisation means cultivating and educating young people with the goal of making them realise that they have to be autonomous, they have to take decisions to change things. Our associational tissue might offer something in this respect; it can give to our young people the necessary instruments that would help them be responsible, create their own groups, take decisions in their local environment, take the initiative and change things, because this situation cannot go on like this forever.” (Focus group interview, Association 2 member #4, December 23, 2015; emphasis added)

In sum, the above-mentioned respondent seemed to claim that adolescents are in urgent need of a different approach in their school system, as well as a new way of life that could help them be more creative and responsible for their own future. Thus, I would add, young people’s perspective on the future of life may also include ecological respect and protection.

6.2.2.3. *Motivational framing by Association 2*

The “rights of nature” frame

Basically, one of the interviewed members of *Association 2* stated that sustainability problems will persist as long as human beings continue to be egocentric, i.e., as long as they consider themselves to be the masters of the Earth and have dominion over the other living/non-living beings. According to this interviewee, this anthropocentric view has undermined the natural balance on the planet:

“[...] the human being has not a supernatural power, he is not over nature, he is one element of nature. Thus, when we understand that us, as well as the ants, the earthworms, the trees [...], that we are groups,

nations that have the same rights and duties on this Earth, at that moment, when we leave our egocentric vision, based on the fact that man dominates all, then, when we live that, we start to be totally integrated into nature, we are at the service of nature, we belong to nature. If we accept this stage, that is, considering oneself as a simple element, a simple instrument of the natural tissue, at that moment, we occupy our exact place and we have no more need to dominate nature or to dominate natural forces; we don't have this idea in our mind any more, but instead the idea is to live in balance with nature and respect all living beings. There is nothing, neither a tree, nor a plant, nor animal, nor insect that is harmful, each has a definite function; there is no bad herb, there is no harmful animal. All has a definite function, so we don't have the right to touch the living beings, we are not the breath who gave life to living beings, it is Nature who created them, and Nature, on the Earth, it is old, it is... In 3 billion years, very sophisticated processes have developed, and we are very far from imitating and understanding that. Thus, it is better to see what nature does, and limit our damage to this natural system.” (Individual interview, Association 2 member #1, October 19, 2015; emphasis added)

“When I see an ant, I know that I don't have the right to kill it; even if it is standing in a place where it should not be [...], I don't kill it, I take it and I move it away, I don't want to kill it, there is no sense in killing it, there is another way to get rid of them [...].” (Individual interview, Association 2 member #1, October 19, 2015; emphasis added)

The same respondent also expressed his/her personal views about the human responsibility to respect and protect the rights of other living/non-living beings:

“I feel that I am part of nature, that I occupy my place if I respect living beings...Living beings are untouchable, we don't have the right to touch them. This is not my role, it is not me who created them, nor I have the right to put an end to their life. I am in complete harmony with trees, animals, [...]. I don't have the right to go and catch him in order to kill him, etc. he is there, so he has a role to play. The same is for plants, it is the same thing. For example, you see, over there I have a plant that for some people is considered as very nasty, but it is a very effective plant in the garden for a degraded soil, for eroded grounds. It is a plant that fixes the soil and impedes erosion, it is called the Chien-dan, it is a very useful plant [...]. In order to get rid of it, we use other plants that can kill it, its root system, and we move it away from the light. We don't use toxic products, we use other plants [...]. Nature contains toxic products but they emit small quantities of toxic elements that can be managed [...], whereas the toxic produced by humans persist many years and they have a serious impact [on us].” (Individual interview, Association 2 member #1, October 19, 2015; emphasis added)

To sum up, if people started to act as part of nature's life-cycle, they would be able to respect and protect the rights of all living/non-living beings.

The "human survival" frame

One of the respondents I interviewed during the focus group discussion explained that sustainability does not simply arise from the realisation that sustainability problems are affecting us. Principally, sustainability is what really makes our lives meaningful:

"[...] it [i.e., sustainability] rather makes me think at the idea of living a meaningful life; indeed, I could find the meaning of life by living much closer to nature." (Focus group interview, Association 2 member #5, December 23, 2015; emphasis added)

The other interviewed members of *Association 2* also contended that a degradation of nature is one the biggest threats to human survival. Hence, nature and natural elements ought to be protected from human's destructive activities simply because we totally depend on them for survival. For example, trees allow us to breathe fresh air:

"For example, trees are the only that can feed themselves without our help; there are some minerals that they get from their roots [...]. They can live without us; on the contrary, we cannot live without them, as well as animals. Animals are totally dependent on trees and plants, but they are not dependent on us. The evidence of this is that they have been living for 350 million of years before our appearance, so this is the proof that they don't need us [...]." (Individual interview, Association 2 member #1, October 19, 2015; emphasis added)

"Well, first of all, you should be aware that nature is the basis of our existence, and this is something I want people be aware here in Tunisia as well, because people in general...they are spoiling, they are wasting natural resources without being aware that it is the basis of our existence, because without nature we can't live, we can't breathe, we can't nourish ourselves and we become sick, and this is something that people have to understand [...]." (Individual interview, Association 2 member #2, October 18, 2015; emphasis added)

In conclusion, according to the last respondent, since nature is the basis of our human existence, there is no point in destroying and despoiling it.

The “right of future (persons)” frame

Being responsible toward future generations is another motivational frame used by the interviewed members of *Association 2* in order to motivate people to abandon unsustainable nature exploitation activities and, consequently, to engage in sustainable collective action. As one of the respondents overtly stated:

“[...] if you exploit the nature, there are no resources, there is no space for the future generation anymore from it, this is sustainability.”

[...]

“Well, if you protect, I mean, if you work in the environmental field you do it for the present and you do it for the future.” (Individual interview, Association 2 member #2, October 18, 2015; emphasis added)

Thus, future generations are no less entitled to enjoy natural resources than present generations; consequently, space should be left for future generations to live in a clean and healthy environment. Similarly, a focus group participant said:

“[...] we have this day-to-day culture [...], we need people not to live in despair, to believe to their future and to invest on the future. This can also be found in problems related to agriculture [...].” (Focus group interview, Association 2 member #5, December 23, 2015; emphasis added)

According to the respondent, the short-termist view endorsed by present generations, who seek immediate material benefits from the unreasonable use of scarce resources, may hinder sustainability as well.

By contrast, respecting nature through permaculture is the same thing as respecting nature and the others, i.e., the living/non-living, human/non-human beings. Environmental respect is thus regarded as the *conditio sine qua non* for treating the others well and vice versa.

Indeed, as observed by another respondent, this forward-looking lifestyle may have a positive impact on future generations:

“[...] if you respect nature, you respect the other, because I think you can't...respect is something very, very important, and somebody who respects his environment...the environment is the nature, and the environment is also the other human beings, the animals, the sea, and respect for me is the essential, the basis of a good behaviour. I mean, if you respect everybody, everything, there is no problem, yeah, I think, this encompasses and comprises everything, if you respect, your environment...it's natural that you treat somebody or something well, if you respect them [...].” (Individual interview, Association 2 member #2, October 18, 2015; emphasis added)

The “common good” frame

One of the respondents argued that people would become ecologically-responsible if they started to work for the common good, that is, if they started to directly manage and take responsibility for something commonly owned, as happens in the case of community gardens. Thus, it is not the State but ordinary citizens that should actually own the “commons”:

“[...] sometimes you just have to need to talk to people and have a discussion and they will change their minds. I mean [...], currently, I am working on community gardens here in Tunisia, and we are actually planning to do this and this community garden has the advantage that people are forced to manage their own garden, I mean, it's not only the garden of a family, it is garden of the whole community; and currently residents in Tunisia, they throw waste very easily. You see waste everywhere but as soon as you get the responsibility for something in common, your mindset will change, you will see that nature is not something that belongs to the State, it belongs to yourself, so with my action I really want to make people responsible.” (Individual interview, Association 2 member #2, October 18, 2015; emphasis added)

A similar topic was discussed by a focus group participant, who seemed to believe in the re-appropriation of the “commons” (e.g., land), as well as in the possibility of making sustainable profits through permaculture activities:

“If we get to demonstrate that permaculture can be profitable and cheap, and if we sensitise young and future engineers, and all young people in

general, I think that people will be more in favour of this spirit of permaculture because *they will realise that it is possible to live in a small space. To satisfy one's needs, it is not necessary to be very rich landowners and possess many hectares of land.*"

[...]

"with a small space, which might be further extended, we could live normally, satisfy our needs and become active in the long run in the field of sustainability and healthy environment, and this is applicable to all levels." (Focus group interview, December 23, 2015, Association 2 member #4; emphasis added).

According to the above-mentioned interviewee, cultivating small pieces of land is an activity that all people can afford to do. Therefore, permaculture may encourage citizens to empower themselves and to live decently by respecting their surrounding environment.

The "health immunity" frame

One of the interviewed focus group participants argued that sustainability problems could easily be addressed by focusing on the individual person and, more specifically, on his/her health immunity needs:

" [...] in my view, the starting point of sustainability is myself as a person."

[...]

"the solution was in the immune system, so I am not talking about sustainability, but I am talking about my sustainability. I want to expand my experience, I want to enrich myself, I want to benefit my closer environment; and with my limited means, I have progressively spread my experience to make it more and more important."

[...]

"The keyword number one is immunity, which affects the person, but I would also say, the immunity that affects the environment as well, because if we pollute, it is normal that then it is very difficult to clean up, if we pollute...instead of cleaning up, it is better not to get dirty, instead of recovering, it is better not to get ill, etc." (Focus group interview, December 23, 2015, Association 2 member #4; emphasis added).

Likewise, according to another respondent, health concerns might motivate people to take action for sustainability:

“I think it is a logical way to be ecological [...]. *For example, the aspect of health for me is very important and I think health is important for everybody. If you respect and treat the nature well, it's good for the health, yeah, I know that is not immediately good for your health, so as I said, it is hard if a person has already his way of thinking and he doesn't want to change.*”

[...]

“[...] I would see it from a more practical aspect, from a practical point of view, because *ecology is our existence and it is our health as well*, it is important for our children. I mean, people are caring a lot about their family and their children here.” (Individual interview, Association 2 member #2, October 18, 2015; emphasis added)

During the focus group conducted with the *Association 2* members, one of the respondents reported that he/she suffered health problems, which he/she tried to solve by developing healthy food products based on plants:

“I had a serious disease and, by chance, I discovered that in nature I could find a solution for that health problem, which was getting really worse. *Thus, I came to sustainability through my health. I trusted nature and then I started to realise that in nature I could find quite good solutions to my problems.*” (Focus group interview, Association 2 member #4, December 23, 2015; emphasis added).

The same respondent said later in the focus group that:

“*Sustainability is, above all, a question of defending ourselves, a social and cultural problem [...]. I eventually realised that in order to feel better, I had to come back to nature and I had to find a solution in nature. Thus for me sustainability starts with a person in good health, [a person who] can bring about more to my environment, to my family [...].*” (Focus group interview, Association 2 member #4, December 23, 2015; emphasis added).

On this point, another focus group participant explained that health problems are mostly linked to economic problems, which, in turn, are often related to unsustainable industrial development systems:

“Actually, I think that the environment is the environment for us. When in Tunisia we see garbage, pollution and all the pesticides that are utilised [in agriculture], it is, first of all, an health problem. These health problems are actually related to the economic problem in a sort of negative spiral, as it happened in the degraded region of Gabès, where the link between the two problems is pretty evident. The garbage has been dumped into the sea, all its natural resources and fishing activities, etc. are disappearing, and people’s health is at risk, too. Thus, sustainability is a true problem in a country like Tunisia, because we don’t have the means to experience sustainability in a certain way [...]”
(Focus group interview, Association 2 member #4, December 23, 2015; emphasis added)

6.2.3. ASSOCIATION 3

In the individual in-depth interviews with the *Association 3* thought leaders, project coordinators, and participants, I identified a wide range of diagnostic, prognostic and motivational framings. I will briefly present them here.

6.2.3.1. Diagnostic framing by Association 3

The “disappearance of the economy-ecology nexus” frame

What I have called the “disappearance of the ecology-economy nexus” frame was used by both *Association 3* members and participants during individual interviews. This specific frame refers to the social need to reconsider the relation between ecological and economic matters, especially when sustainability issues are at stake. For example, according to some respondents, sustainability problems occur because citizens have failed to recognise that ecological and economic crises are two sides of the same coin. During one of the individual interviews I conducted, the chosen informant stated, for instance, that:

“[...] In the mini-nurseries that we have in Morocco, there are a lot of trees. Lands are distributed among farmers in order to allow them to plant trees. So, it’s good for the environment, but also for the economy because, for example, these farmers don’t have money to buy trees. Association 3 donates them to the farmers, without asking money for it, and this helps them develop their own environmental projects.”
(Individual interview, Association 3 member #1, April 18, 2016; emphasis added)

Thus, according to this respondent, the creation of beneficial socio-economic policies (such as land redistribution among local farmers, and donation of trees to be planted on redistributed land) actually provides economic incentives to *Association 3* beneficiaries. As a result of the incentives provided by *Association 3* to local agriculture and farming, these “empowered people” are potentially able to implement environmentally sound and economically profitable projects.

During another individual interview, one of the respondents made quite a similar comment in this respect:

“Do I think that humans are using sustainably the environment? No. Humans have always...animals, humans, *we have always used the environment to survive. We've gone beyond survival [...].* We are no longer in what is necessary to survive, so instead of thinking about just needing food and water and having clothes and shelter, we're thinking how can we have our iPhone or the next computer or, you know, a nice car, a huge house with a pool, because *we've gone past what is necessary, what are the essential elements, we have been transformed to a state in which we no longer sustainably respect and use the environment.*” (Interview November 30, 2015, *Association 3* project coordinator; emphasis added)

The respondent quoted above, however, analysed the ecology-economy nexus from a very peculiar perspective. Indeed, as noted by the selected interviewee, although the survival of human beings has always depended on the environment, affluent populations have to be blamed because instead of respecting the environment they have mostly strived to increase their own material-economic gains. As a consequence their selfish attitude, they now live well beyond the realm of necessity and survival. In current times, therefore, it is imperative to reintegrate the environment into socio-economic systems (and the other way around) in order to begin the walk toward sustainability.

6.2.3.2. Prognostic framing by Association 3

The “longevity” frame

One of the interviewed members of *Association 3* argued that any local development project, plan or policy, to be really sustainable, has to adopt a forward-looking stance, i.e., has to take into account the long-term intergenerational impact of both mobilisation and action for sustainability. The selected respondent said on this point:

“We must have sustainability in every project, because when you don’t have sustainability they stop just there and they don’t develop. [...] *Whatever the project, sustainability is good for the future, it’s not just good for us now, and for the people now in the world, but it’s good for the future.*” (Individual interview, Association 3 member #1, April 18, 2016; emphasis added)

In another interview, one of the *Association 3* participants stated that:

“[...] [sustainability] *helps others in the future, not only in this month but also in the future.*” (Individual interview, Association 3 participant #1, April 18, 2016; emphasis added)

Thus, I have called this frame the “longevity” frame because it expresses the ideas of resilience and durability, which actually characterise all sustainability projects. Additionally, the term “longevity” projects us into the future. As observed by the *Association 3* project coordinator,

“*We’re working with communities, giving them the voice; so we are working with all of the people within the community, the old and marginalised people, and we give them the opportunity to contribute to their future and take hold of their future.* The project that we’re doing, the activities that we’re bringing is because they identify this as a priority and they want to develop in this direction. We are guiding them and helping them to do that.”

[...]

“I think that there needs to be a change in developmental and social norms, in cultural norms and beliefs and in order to do that it takes time, it takes a deep commitment, and it takes time; *so it’s not something that it’s gonna change from today and tomorrow, you know, that’s something*

that takes an investment in time [...]. (Individual interview, Association 3 project coordinator, November 30, 2015; emphasis added)

As pointed out by most interviewees, sustainability problems can be solved if we choose to act sustainably day after day, starting with small things before leading up to those that are greater and can really make a difference in people's lives, as well as to the environment.

Moreover, working on longevity requires, for example, the design, planning, and development of educational programmes for children, which represent future generations (and future progress). By referring to the role of education in the sustainability projects promoted by *Association 3*, one of the respondents declared:

“for me the problem is education, if we don't engage in education, people, youth, cannot understand the importance of sustainability and the importance of development, so we need to work in the education, with alphabetisation. (Individual interview, Association 3 member #1, April 18, 2016; emphasis added)

The “participatory approach” frame

According to one of the respondents, participation is the main antidote to unsustainable growth in Morocco:

“I would say the essence of what we do, even though we have done a lot of agriculture projects, help projects, education, but the core of it, really, is that we create community meetings, and assist community dialogue and their creation of action plans, and help implement the projects that they identify; and so that's why we do a range of projects, because of course communities express a range of priority needs [...]. So, we are facilitators of participatory planning and we currently focus on agriculture because that creates the opportunity for a range of human development projects to be funded and implemented.” (Individual interview, Association 3 thought leader, December 14, 2015; emphasis added)

Later on, the same interviewee stated that:

“[...] participation is the primary factor for sustainability. [The fact that] people are involved in the decision-making, that enhances or that increases the probability of sustainability [...]. So [...] [sustainability] incorporates a range of wide-ranging factors, and in order to incorporate those factors you need to apply the participatory approach. The way to

get the cultural perspective, the social, the economic, the political, the historic, all those perspectives, is unique. *To have a participatory approach, it needs to be inclusive*, in order to gain all those outlooks. *So, to the extent that you're inclusive, to the extent that you're ready to incorporate those viewpoints, to that extent, you are capable to therefore enhance sustainability.*" (Individual interview, Association 3 thought leader, December 14, 2015; emphasis added)

According to the same interviewee, fostering an inclusive local development is also crucial for sustainability advocacy:

"[...] *you create energy for advocacy by doing a participatory approach.* It's a separate effort, but it's not entirely a separate effort. Sustainable development, participatory development, among many things, includes energy towards advocacy ('let me do it well'). *People understand the importance of community meetings, they become empowered, they become confident, they know that you need to engage the government [...].*"(Individual interview, Association 3 thought leader, December 14, 2015; emphasis added)

Likewise, another interviewee said:

"[...] *so you need the bottom-up, but also, at the same time, you need it from the top-down;* so you need to have the policies and structures that enforce that, uphold that, and ensure that. You know, when there is any type of unwillingness to uphold the equality values, there are still mechanisms and fences to ensure that it's done." (Individual interview, Association 3 project coordinator, November 30, 2015; emphasis added)

According to the above-mentioned *Association 3* project coordinator, both top-down and bottom-up participation processes, which tremendously contribute to the overall construction and implementation of *Association 3*'s sustainability projects, can empower and give confidence to *Association 3* beneficiaries. Urban citizens as well as local farmers are thus enabled to decide not only what is good for themselves and for their own environment, but also what is needed for their future development.

6.2.3.3. *Motivational framing by Association 3*

The "relational" frame

Human relationships are at the core of all sustainability projects. According to some interviewees, if the social bonds and personal

relationships between people are strong and durable, the agreed projects will not come to a sudden stop all at once. One of the selected respondents claimed in this respect:

“The Association 3 changed my life because they let me to change at first myself and with the Association 3 I will help others change themselves and the others. It’s like a message, the other changes the others, this is sustainable development, we don’t start when I finish one project.” (Individual interview, Association 3 participant #2, April 18, 2016; emphasis added)

In another interview, an *Association 3* volunteer explained to the interviewer that:

“R (Respondent): [...] when we used to visit the south, we conducted interviews with local farmers; they live in the south, especially in the mountains. People just need someone who can help them [...].”

I (Interviewer): they do something for nature because we must save our nature.

R (Respondent): Yes, of course, we must save nature but [...] people want to develop their country. Now, Association 3...they give trees, they create developmental project like...there are nurseries there, nurseries for trees. Sometimes they work for free just because they know that this project is for their country. Often they work for free in order to help their villages, their fields, and they also ask all the time if there is a trainer for them, to develop their agricultural project. They look for someone to learn about how we take care for trees, how to protect them. Thanks to the Association 3 certificate and its agricultural projects they can sell almonds nuts.” (Individual interview, Association 3 volunteer, April 18, 2016; emphasis added)

By looking at the quoted excerpts from this brief interview, it emerges that local farmers are often in need of someone who they can relate to. Indeed, this network of personal relationships allows farmers to be trained, to learn how to do things, as well as to understand how to create and implement a given developmental project with the help of *Association 3*.

Similarly, the interviewed *Association 3* project coordinator described the personal and relational aspects that are often involved in sustainability engagement and action:

“For a sustainable future we need to have...we need to be more caring, and more personal relations, so that people don’t care so much about things and objects, so that they care about people; and when you care about people, you actually want the person to be next to you, to be happy; and the person who is next to you to be healthy; and in order to be happy and healthy, you may need to have good quality food, which means that you need to respect. [You] have learned to be able to build it on, and you need to be healthy, so that means that you need not to have tons of pollution, and not to have, you know, all the things that are degrading the planet and making it effectively unhealthy”.

[...]

“I was very close to the beneficiaries, I was very close to the people, working with them one-to-one, interactively. [...] when you have the individual connection you change what the person is, emotionally and personally, and without that, it doesn’t matter what skills they have, they don’t have the personal drive to make a difference [...]. By having personal interaction, it makes a difference. I would rather reach one person and actually have this person make a difference, than reach five-hundred or two-thousand or fifty, and not feel like there is any actual change. That’s where the sustainability comes in, when you have that deep commitment, that connection.” (Individual interview, Association 3 project coordinator, November 30, 2015; emphasis added)

During the same interview, the above-mentioned interviewee explained that whenever *Association 3* beneficiaries realise that sustainability projects are actually able to reinforce webs of personal connections even within the larger social community, the imperative to maximise personal utility and economic benefit (e.g., money-making) becomes a secondary concern for people:

“[...] I think that you can teach them how to have a fish or you give him fish. You know, but if you just teach him how to fish, if you just teach him how to build a nursery but he doesn’t understand why, he doesn’t see the bigger pressure, he doesn’t understand why it’s important [...]. You know, he’s gonna stop fishing because he’s gonna find...he’s gonna bribe officials, he’s gonna pay someone else to do the nursery. He’s just gonna stop build the nursery because it doesn’t matter. Everybody is willing to do something for money. You know, but if you are willing, if you do it because you have a drive, the money would come afterwards. And that’s when it becomes sustainable. It doesn’t matter the conditions; either way, you think it’s a priority and you want to make it happen.” (Individual interview, Association 3 project coordinator, November 30, 2015; emphasis added)

The “human rights” frame

As one of the respondents pointed out during an individual interview, it is the language of human rights that actually motivates people to take action for sustainability:

“[...] a human right is universal and transcends politics, culture: it’s humanity; and so that’s how we see it, and that’s why I feel that it is so important in the Arab Spring, and we are focusing right now, you said this, on Middle Eastern countries. When we look at the Arab Spring, we feel that what we’re doing is the exact call, what people are crying for, dying for, which is to be able to affect their own faith, their own...to be able to meet their needs, to be able to have jobs, to be able to make decisions and implement those decisions. And so that’s really why we feel that the participatory approach is not only sustainable but also peace-making [...].” (Individual interview, Association 3 thought leader, December 14, 2015; emphasis added)

Further, as noted by the same respondent, sustainability engagement and action mostly occurs because people want to see their human rights better defended and protected:

“[...] the thing is, when communities determine their development path to meet their needs [...], that is a human right [...]. You know, it touches to the core of us, you would need...[We] all want to be able to affect our own faith, to be able to create jobs, to be able to build a school, to have clean water, to be able to take control when you don’t have those things.”

[...]

“you know, being able to come together in an inclusive way at the local level, that’s political [...] and, yes, the process is intended to result in what you call ‘material’, but the causes of it is actually intersected with the political aspects of human rights that you were referring to and the other part of it is that there are no preconditions [...], there are no preconditions to sustainable development [...]. In the process of achieving the material you’re acting political.” (Individual interview, Association 3 thought leader, December 14, 2015; emphasis added)

The “religious (Islamic)” frame

During individual interviews, some Association 3 members/participants directly referred to religious motivations to engage in sustainable action, such as planting trees:

“It’s good for me because Allah likes the person who takes care of planting.” (Individual interview, Association 3 participant #3, April 18, 2015; emphasis added)

“[...] without the trees, we don’t have anything, and in my religion, Islamic [...], they say that it is good for you to plant [...]. It is the first cooperative in the Ourika Valley, the Foundation teaches us taqwá [Islamic God-consciousness, self-restraint and piety].” (Individual interview, Association 3 participant #4, April 18, 2015; emphasis added)

As I have discussed elsewhere in this thesis (cf. Chapter 2), *taqwá* is an Islamic principle whose application may motivate people to act sustainably in real-life situations.

In another individual interview, one of the informants examined the relation between Islam and sustainability by quoting hadiths. Most importantly, the same respondent explained how this relation has actually oriented *Association 3*’s sustainability projects:

“[...] There is a hadith from our Prophet that says that if someone of you is dying and has a tree in his hand and plants it, he will get a reward for that. Another concept of the sustainability from an Islamic perspective is that, I mean, [...] in Islam whenever someone is doing something, he does it continuously. I mean, we continue to pray, we do not start something that we will never continue, and we do not even start something that will start and end in a short time frame. You always plan for years and years to come and this concept can also be found in Association 3. Association 3 is also based on this, this is one of our fundamental approaches to sustainability, to carry on our projects and our programmes; we’re not planting only for the planting season, we are planting for years and years, and for hundreds of years. Therefore, we do it for the safety of the human being and for the safety of areas from which people are leaving and for the improvement of those areas as well. I can see this relationship between the Islamic rules and sustainability, they’re going hand in hand, together.” (Individual interview, Association 3 member #2, April 18; emphasis added)

6.2.4. ASSOCIATION 4

In the taped interview transcripts that I obtained from the in-depth individual interviews and the focus group interviews conducted with *Association 4* members, there is evidence for the extensive use of diagnostic, prognostic, and motivational framings.

6.2.4.1. Diagnostic framing by Association 4

The “eco-injustice” frame

I have called it the “eco-injustice” frame because some respondents were specifically concerned with both socio-economic and ecological problems, which, according to them, ought to be taken into account so as to forge a new sustainable path to development. One of the selected interviewees said in this respect:

“[...] when we destroy nature, we destroy this [natural] capital, so the [human] well-being disappears. This is unjust, this is an injustice. There are people who live in vulnerable conditions and in bad sanitary conditions. In relation to that, vulnerabilities are the risk of floods, the risk of illnesses. People who experience unsustainable development suffer from it and are subjected to ecological, economic, social injustices. I think that we are going back to the departure point, the human being. Unsustainable development has repercussions on injustices against the citizens and the population, especially against the most vulnerable. The person who is not vulnerable can escape from it, but the person who doesn't have the means to overcome it, he will suffer from the consequences of unsustainable development. It happens in the case of the development of proximity, as well as in the case of global development (atmospheric, nuclear pollution).” (Individual interview, Association 4 member #1, October 17, 2015; emphasis added)

Similarly, another respondent stated that:

“[...] We need to minimise poverty and, at the same time, we need to preserve and take care of the environment and nature.” (Individual interview, Association 4 member #2, October 17, 2015; emphasis added)

The continuous repetition of these socio-economic injustices also seems to suggest that sustainability problems are not only related to ecological issues, but are also determined by the nature of social structures, as well as by the economic models of development that prevail in a given social and political community. In the prognostic framings that will be examined in the next paragraph, a significant part of the blame is placed on both State and non-State actors who, according to some respondents, have not properly addressed socio-economic injustices.

The “savage capitalism” frame

I also identified the “savage capitalism” frame, which was used by some *Association 4* members to explain what has caused most sustainability problems in Tunisia and elsewhere in the world. Savage capitalism, as noted by one of the respondents, arose as a result of luxury, speculation and unrestricted accumulation of money. In addition, this savage capitalist system has not been able to maintain the balance between human development and ecological health. As overtly stated by the same interviewee:

“Now the problem is the evolution of the human being. Seeking for it is destroying nature. The point is to find the right balance between human evolution and the respect for nature. That is, the kind of person who seeks luxury and wants to go to the moon, doing this or that, this ruins our environment or our resources, because of savage capitalism. They are crazy, they say that we have resources for eighty years, that’s all. I’m not saying that I don’t want to live eighty years, it would be sufficient for me personally, but what are you going to leave to your children? They are crazy, savage capitalism is making money in the shortest time, they don’t care if the others die, if they have already died, it is their own problem, they don’t try to do something for the others. They are crazy. Thus, we cannot say they we have to stop progress, or luxury or science. No, not at all. But they should be at the service of useful things.” (Individual interview, Association 4 member #3; October 17, 2015; emphasis added)

Further, the above-mentioned respondent argued that savage capitalism has produced an individualistic society in which people are selfish and self-centred. This egocentric mentality has contributed to the destruction of the environment:

“There is one portion of the society that is very individualistic, that is, the world is centred on them, they don’t care about the environment [...]. They claim that their problems only concern everyday life, how to find a job, etc.” (Individual interview, Association 4 member #3; October 17, 2015; emphasis added)

Likewise, another respondent declared that human selfishness impedes people from taking care of the others, environment included:

“[...] I’ll give you an example. Waste. Is it possible to live in an environment full of waste? What should citizens do in order to keep their

environment decently clean? *They have to get rid of it [...]. Do you know why? Again, because the citizen is so selfish that he does not think at the others, he is only preoccupied with his essential comfort.* If he sees that there is garbage and litter at a short distance from him, he believes that they belong to other people. They have been thrown elsewhere, so he doesn't care. [...] *this reminds us to improve, to improve ourselves, inside and outside, because it is a matter of our mind-set.*" (Individual interview, Association 4 member #2, October 17, 2015; emphasis added)

Thus, according to the above-mentioned respondent, what I would call the "individualist attitude" has to be blamed for pollution. The same respondent also claimed that people are not willing to work for the common good, thus creating an unsustainable and turbulent society:

"Insofar as individuals and the population will not think for the common good and everyone will think of himself first, i.e., insofar as there will be excessive individualism, we will live to fight one another in a chaotic environment." (Individual interview, Association 4 member #2, October 17, 2015; emphasis added)

Furthermore, savage capitalism has generated an individualistic society whose members don't look at the long-term impact of their actions on the natural world, but just focus on the short-term impact and benefit of what they do. As noted by one of the selected respondents:

"[...] Unfortunately for us, they don't want to wait five-ten years, no, if a project doesn't make them earn money in one year, one year and a half, it is not interesting. They want to make money easily, with the minimum efforts, and rapidly." (Individual interview, Association 4 member #3, October 17, 2015; emphasis added)

Another respondent clearly explained that when natural resources belong to the public (e.g., CPRs such as fisheries and forests), several conflicts arise between those who have planned to make an immediate profit from the unlimited extraction of resources, and those who allow for these (renewable) resources to regenerate themselves before being used again:

"[...] I'll give you a simple example: the fishermen of the ----. The place is very beautiful, terrific; it is located in an archipelago. In the north of -

----, in front of ----, there are people who put wood on trucks. Fish is abundant in that place. Traditional fishermen use a rope called 'kis' to inspect the soil. This is an absolute catastrophe. Those fishermen don't have any knowledge or conscience of sustainability. They do that and in so doing they have blocked the harbour for two-three months, calling for the use of that type of technique, which is absolutely catastrophic. Therefore, if we take into account their activities, they reason as follows: I want to survive, I need to eat, and in order to eat I have to fish in this way. But if you fish like this, tomorrow you will not fish any more like this, because you will not get anything. There will be nothing to fish, *so there is a conflict between the immediate interest [...] and the long-term interest.* I gave you the example of fishing, but we could also take the trees, for example the management of forests in Tunisia. We have [...] the pine, there are the pine-nuts, which are very expensive, 1 kg costs 40 euro, or something like that, white, we put it in the tea, it is really expensive; thus there are some families that pick up these pine nuts, some people either use them or sell them. With the Revolution trees have been cut down, people themselves have cut them in order to sell wood, now we cannot neither buy nor sell pine nuts anymore, because there are no trees left. I am exaggerating a bit, because it is not a generalized problem, of course there are still some pine trees, but this is the reality. I have pictures of it. There are cut-down forest trees, they were cut down in a brutal way, and this is not for the inhabitants. Big trucks arrive there, they offer and distribute shredders. In the evening the truck comes and there are those who put the wood on the trucks and disappear. If there is a policeman and a forest guard who stops them, they give them money and they go. This is what happened and it is still happening now. In the industrial zone of Tunis, the factories use the wood of the northern forests in an illegal way. This is a relevant example of unsustainability." (Individual interview, Association 4 member #4, October 17, 2015; emphasis added)

During another individual interview, one of the respondents claimed that we have to face this permanent conflict for the "commons" in a more reasonable way — that is, by seeking a balance between the satisfaction of human needs and the protection of nature and natural resources:

"This is the real dilemma, i.e., finding the right balance that would benefit all people equally. On the one hand, our needs, and on the other, environmental protection. It is not possible to have one without the other, it is not admissible that human beings satisfy their own needs by degrading nature. Further, we have not to safeguard nature and make humans remain in the same condition without satisfying his needs, we have to protect human beings before safeguarding nature. We have to reconcile the two [...]. Thus we have to think and propose solutions, not for the next two-five years, because who is in charge of doing this are political actors, decision-makers. Political elites are only preoccupied with the next elections. They have to find solutions for the following five-

three years until the election, then they get elected and they don't do anything; but for land, for humanity, we have to find sustainable solutions, which should not depend on politics. Rather, they have to do with human survival." (Individual interview, Association 4 member #3, October 17, 2015; emphasis added)

Interestingly, the above-mentioned respondent noted that the short-termist and greedy mentality described earlier has also affected political elites and decision-makers, who have not been able to propose any constructive solution to most sustainability problems.

6.2.4.2. *Prognostic framing by Association 4*

The prognostic framing articulated by *Association 4* respondents, it seems to me, centred around the argument that the so-called politics of the "enclosure of the commons" is not sustainable. Thus, I have called it the "inclusive management of the commons" frame.

The "inclusive management of the commons" frame

During the in-depth interviews conducted with some of the members of *Association 4*, the "popular right to the commons" was often evoked:

"After the Revolution, all the barriers that had been previously erected were destroyed by the population. We must respect people's right to nature. Why should we create a barrier between them and the park? Until ----'s period, the park had been created through enclosures. They [i.e., citizens] destroyed the enclosures in order to regain their right. For them, the creation of the park was viewed as a way to protect nature from human presence. Association 4 called for [...] a reconciliation between the Tunisian administration and the population, citizens vs. the representatives of government. The network of associations acted a mediator between the two sides with the goal of getting them together and, at the same time, taking care of nature. You, citizens, stop destroying nature and you, local government, understand that citizens have rights and ought not to be excluded. We were accepted by the two parts and we played this social role of bridging the government and citizens (i.e., the popular side)." (Individual interview, Association 4 member #1, October 17, 2015; emphasis added)

According to the above-mentioned respondent, people had retaken the "commons" by destroying these enclosures, and, most importantly, they had demanded their right to a healthy environment.

As a result, the barriers erected between the local population and the enclosed lands disappeared. Thus, the same respondent seemed to claim that no enclosures of the “commons” should be made unless citizens are fully included in the decision-making processes regarding the creation, use and management of the public good (i.e., the public park).

Many of the interviewed *Association 4* members explained that their network of associations had assumed the role of “social mediator” in similar controversies. Indeed, *Association 4* generally mediates between the State-institutional actors/the local administration and the population whenever political conflicts over the “environmental commons” may put both social peace and ecological sustainability at risk. One of the respondents said, in reference to the park management struggles that erupted in Tunisia after the 2011 Revolution:

“ [...] Before the Revolution, the Tunisian forest guards used to make laws. They were very strict. However, after the Revolution people got their revenge, and the curator of the park escaped because they put his house on fire; thus, nobody was there, there was neither police, nor military forces, nor forest guards. *They [people] occupied the park.* Civil society members were the only able to talk with those people. The Ministry of ----, the person who managed the park, they could not do anything [...]. They asked us [to Association 4]: could you come and act as an interface between us and the local residents on the ground? The residents did not want to see anyone official or formally appointed. If they had met a policeman, they would have killed him; if they had met the military forces or the forest guards, they would have killed them. They refused to meet them after ten, twenty years of oppression, ‘we don’t want you’ – they said. Thus, the Ministry forced us to come. The government [...] had realised the park project without caring for the local sentiment. They [i.e., governmental authorities] simply said: ‘ok, this is the reserve’; but there were people, women, who had to walk seventy kilometres far in order to feed themselves and go back. They replied to people: ‘If you cannot find wood here, go and search for wood within fifty kilometres’. *A good project, instead, ought to satisfy the needs of residents. Those people should be authorised to go back there in the park and sell their products. It would be better to promote ecotourism and preserve nature with the support of local inhabitants, because local residents belong to the park as well.* Yet they said: ‘No, the park, nothing is allowed, you don’t have the right, go there, if you stay here, we will get your money, we will get everything you have’. Imagine, after the Revolution those people were *vis-à-vis* the forest guard [...]. Thus we established an association that could act as a mediator between the state

and the local populations.” (Individual interview, Association 4 member #3, October 17, 2015; emphasis added)

Other respondents focused on similar problems and issues. For example, one of them stated that:

“We need to find a middle path, that is, *democratic dialogue, communication*, for influencing rather than excluding the others. *We are for an inclusive development, not for an exclusive development* [...]. Ecology is an engine, technology is a tool for sustainable development.” (Individual interview, Association 4 member #1, October 17, 2015; emphasis added)

As explained by another *Association 4* member during a focus group discussion:

“*Before the Revolution, even after the Revolution, but above all before, it was the Ministry of ---- that decided where to create a natural reserve. They did not ask the opinion to anyone, sometimes neither to civil society nor to the scientists, or just to a few of them. They had just one point of view, they didn't consult anyone else over their own decisions. They used to say: 'We want to put a fence there, a natural reserve'. If there were people living there, they forced them to leave. They were delocalised, for example, to protect the gazelle.*” (Individual interview, Association 4 member #5, October 17, 2015; emphasis added)

Further, according to the same respondent,

“[...] *The only benefit that people could get was to work in the reserve as guardians without property rights on those lands. They used to work at building sites. There was always a tense relationship between the protectionists/decision-makers and the local population. As well, decision-makers...when they decide when an area has to be protected, they don't do it in the interest of the forest, in the interest of the landscape or for a cultural interest; rather, they look at the issue only from one point of view: 'we do this reserve because there is the gazelle, that's all'. Afterwards, we intervened by saying: 'listen, we have something to say about that'. Thus we had the idea of creating a reserve without the enclosure and we actually made it. I took part in the working groups between the local population and the administration under the supervision of an intermediary, i.e., an independent expert or association. We tried to figure out, together with the local population, what could be done to protect them and, specifically, how the population could benefit from the protection of the reserve. The administration participated in a group meeting with the population groups in order to better understand how the population could actually make profit from the reserve. Essentially, they were referring to economic profit.*” (Focus group interview, Association 4 member #5, October 17, 2015; emphasis added)

During the same focus group, an interesting case concerning marine ecosystem conservation was provided by one of the *Association 4* members. Again, the selected informant stated that the local Tunisian fishermen and national authorities had often disagreed on matters of “commons management” (in this case, local fisheries):

“I’ll give you another example. We worked with ----, which is the agency for the protection of the littoral-coastal areas, that is, for the protection of everything that is marine. They wanted to settle a natural reserve [...]. We have a small ferry, which sometimes is equipped with oars, but you cannot go very far from the coast if you want to fish. You can only fish along the coast. Well, they wanted to settle a reserve on the coast. Thus the small fishermen with small engines and the fishermen who catch fish in a traditional ways did not accepted that decision. They said to them: ‘No, we won’t apply the law, we will continue to fish as we always did. We don’t have nothing to eat, we need to survive. You want to protect fisheries. Protect us first, we don’t have anything else to eat’”.

[...]

“They could not manage the situation. Therefore, they called us and we organised a series of sensitisation days. I said to myself: ‘let’s start with a school in ----’. We organised one week [...] with children; we bought flippers and masks for diving. Those people lived fifty metres far from the coast but they had never dived. We said to children: ‘We will organise all this for you’. We warned them that: ‘they [i.e., coral reefs] are very sensitive, you don’t have to touch them, before there were a lot [of coral reefs], but now there is nothing left’. We explained them what to do, then we focused on the local fishermen, on their parents and uncles and they started to see it as something useful for their children, who were wearing new t-shirts, flippers and masks [...]. The ---- personnel took part in the project, but they did not talk with people. They just observed how we were talking with fishermen; among them, there were people who had never went to school. There were illiterate people who could neither read nor write. How did we illustrate them that we had to install a reserve there? I said: ‘Listen, this is the entire coast, we want to get one-two-three caveaux, and you will have the access to all the rest, it is simple. The two caveaux will serve for fish production, to produce fish. And you, where will you go? You will go fishing. People who have big boats, who don’t have the right to go here, they will go far over there, but where will you go? Around the fishing factory’. *We had to explain them that the stock of fish could finish, that it was not renewable.* This is what people had not understood. So I said: ‘Take the oldest of the fishermen. Two old fishermen came. From what time have you been fishing? For forty-forty-five years (for all my life). I asked him to tell me about the stock of fish, ‘Ah, in the past we went fishing and we used to catch a lot of fish. And now? I can just fill a bit’. In order to explain them that the fish could finish, I pointed out that it was not me who had said that, but the oldest fisherman. Then, I narrated the story of the chicken. The chicken gives

you three eggs per day. If you see three eggs per day, but you soon realise that after having made “spaghetti al dente with chicken” you have no more eggs, you have to choose between eating “spaghetti al dente” or eating three eggs per day. You have to choose, it depends on your choice [...]. I left the fisherman alone. The day after, I found someone of the -- -- who was speaking with a fisherman; indeed, they were quarrelling. Then, I arrived and joined them. The fisherman called me. He asked me to tell the story of the chicken. Thus, the association acted as the interface between ---- and the local population and succeeded in giving explanations to people [...].” (Focus group interview, Association 4 member #2, October 17, 2015; emphasis added)

The “education-driven sustainability” frame

The prognostic framing includes what I would call the “education-driven sustainability” frame. According to the respondents, education plays a pivotal role in the resolution of present-day sustainability problems.

As stated by several respondents, education starts with Tunisian children, who, in turn, may sensitise their own parents and families:

“Sensitising adults through their children. Parents are proud of that. They appreciate that children have learned something. It works. Sensitising children is more effective than sensitising adults directly. We have experimented this approach.” (Individual interview, Association 4 member #2, October 17, 2015; emphasis added)

“*Children are permissive. They easily engage in activities, in associational activities, which is a good thing. Young people like meeting other people. They like sociocultural activities, they have a spirit of openness towards the others. It is important to get children and future generations used to the idea of respecting the environment and nature.*” (Individual Interview, Association 4 member #6, October 17, 2015; emphasis added)

In another interview, one of the respondents noted that disabled children are in need of ecological education:

“[...] *in a formation centre we helped young people with limited capabilities. We organised a project aimed at teaching [bioagriculture] to children attending primary school. They collect water and take a small piece of land. Their teachers teach them how to plant and harvest, so that they can experience agriculture. They learn something, they open their horizons.* After that experience, they started to change their own way of life. At the end of the project, people’s views had actually changed. We also promoted seminars and guided visits on the ground with scientific experts and well-informed people who would show them that we have to

do something for this land, for Tunisia, we have to preserve resources.” (Individual interview, Association 4 member #7, October 17, 2015; emphasis added)

Further, ecological education is both formal and informal. One of the selected interviewees said in this respect:

“Informal education is an excellent alternative to formal education in schools [...]. You know that in our Arab-Muslim culture, [education] has a lot to do with the ethical-spiritual dimension. In order to live well, the first weapon that we have is education. The first word pronounced by the Prophet, as stated in the Quran, is “read”. The first word. Knowing how to invest on education and knowledge means knowing how to invest. Education is the core of all social processes (Individual interview, Association 4 member #1, October 17, 2015; emphasis added).

Still, as remarked by other interviewees, schools are the best places to boost ecological learning among children:

“[...] [we need to] educate the population in schools, to communicate [ecological] ideas and to work on proximity and locally. We ought to raise the interest of young people by explaining them what should be done in order to forge new ideas for maintaining a balance within society. Society needs to preserve resources. For example, [...] we planned to go and visit the centre for waste collection and treatment, with the goal of explaining people that this is a national issue, that the State has invested on that and that they can benefit from this installation, they might work there, etc.” (Individual interview, Association 4 member #7, October 17, 2015; emphasis added)

“Thus, we should promote correct behaviour, so that the environment and nature would be protected and conserved. The first step is educating children in order to get them used to environmental respect, as well as living good neighbourly relations with other people, and so forth.” (Individual interview, Association 4 member #2, October 17, 2015; emphasis added)

6.2.4.3. *Motivational framing by Association 4*

The “human-nature harmony” frame

One of the respondents affirmed that calling for the respect of human dignity is one of the first steps toward achieving a sustainable society that lives in harmony with nature:

“For me, sustainability, which should be first of all considered in all its different aspects, environmental, social, economic, political, etc. should be centred on human rights. That is, at the core of the ‘sustainability

machine', there is the human being, i.e., human dignity. One of the strongest slogans of the Tunisian revolution is dignity. I conceive sustainability and sustainable in relation to a development that is sensitive to the conditions of life and to human well-being [...]. We need to enlarge the social circle, which is atrophic compared to the economic sphere.” (Individual interview, Association 4 member #1, October 17, 2015; emphasis added)

The same respondent argued that human life and human well-being depend on the enjoyment and respect of natural resources, and especially of water, which is a basic source of life:

“[...] at the ecological level there are other problems as well. In my view, the biggest problem is water. In order to tackle it correctly, we have to take into account the economy of water as well as of our resources, i.e., locally-based natural resources. Water for me is something essential, is a fundamental element. In the Islamic religion and in all [religions], we say “a source of life” when we refer to life and well-being. If there is no water available, nothing works [...]”. (Individual interview, Association 4 member #1, October 17, 2015; emphasis added)

During the same individual interview, emphasis was also put on the need to reconsider the relation between ecological integrity and human rights enforcement:

“[...] I think that ecology could be an engine of sustainable development insofar as the ecological value is integrated with human rights and popular knowledge, i.e., with traditions, customs, knowledge of the previous generations, which could be useful for future generations. Actually, they could be improved with the help of new technologies.” (Individual interview, Association 4 member #1, October 17, 2015; emphasis added)

It is important to note that in the quotation above the respondent referred to the recovery of ancient ecological traditions as cultural instruments for encouraging sustainability and sustainable development. Thus, it seems that religious-spiritual credence (which, in this case, include Islamic teachings) may still play a role in this context.

[...] In Islam, the thing that we say, ‘to do and not to do’, all of this is related to the environment, e.g., the prohibition to cut trees, to slaughter an animal. We don’t put it [i.e., the animal] in front of the others, that is, we leave it alone because the other animals may hear the noise. We have to slaughter it in a way that does not make him suffer, and similar things

for the environment. You should get only what you need, you should not get more than you need, even if there is a lot of water on a big river, you should take only the small quantity that is enough for you [...], and things like that. *For what concerns environmental respect, if we practiced Islam as we should, we could protect the environment, no problem.*” (Individual interview, Association 4 member #2, October 17, 2015; emphasis added)

During the focus group discussion, another respondent commented on this point, saying that:

“Tunisians have a very positive relationship with the white stork bird. Since it is a migratory bird, people believe that the white stork goes to Mecca every year, in Saudi Arabia, for the pilgrimage (hajj qasim). Thus, for them, these birds should be protected because every year they do the pilgrimage [...]. In practice, if you find a white stork in the room of your house, you are not allowed to touch it [...]. This is a very ancient credence but it still continues. Everywhere, in the places where white stork live, there is no disturbance of birds at all.” (Focus group interview, Association 4 member #5, October 17, 2015; emphasis added)

During the focus group discussion, however, one of the respondents overtly stated that present-day religious politicisation fails to serve either the common good or what I would call the “sustainability cause”.

Furthermore, some of the respondents seemed to stress that all human beings should get the opportunity to have their minimum basic needs satisfied. As declared by some *Association 4* members:

“To respect human dignity, we should all have a job which would *satisfy the minimal basic needs of every individual*; because we don’t all have the same needs: there is the person who wants a yacht, another person who just needs, and it is sufficient for him, to take a bus. *We don’t all have the same needs, but there are the minimal basic needs for survival, job, house, water, electricity, there are some basic minimum services that should be guaranteed* [to people].” (Individual interview, Association 4 member #2, October 17, 2015; emphasis added)

“If one place is poor and people have scarce resources, one can sensitise the young people so that they will keep their environment clean and in order; one can make them appreciate life by ensuring them they will reach a minimum of subsistence because those people must eat. *One should give them the minimum vital that would allow them to live, that is, the basic elements, food...it is only after that, that we can take care of the environment, focusing on the cleanliness and embellishment of the environment.*” (Individual interview, Association 4 member #6, October 17, 2015; emphasis added)

Another *Association 4* member focused instead on the importance of love and knowledge when dealing with ecological sustainability. Love and knowledge were thus regarded as two ecological virtues that would encourage humans to respect and protect nature:

“[...] The urbanised children destroy nature, whereas poor people respect nature. They live into nature. They are poor but they respect nature [...]. In order to protect nature, we need to do two things: love it and know it. We need to make people love and understand nature. If you love it, you respect it.” (Individual interview, Association 4 member #2, October 17, 2015; emphasis added)

Further, it was argued that the sense of belonging to nature may trigger sustainability mobilisation and activism as well. This sentiment of human (re-)appropriation of natural space was considered the key to sustainability engagement. Indeed, one of the focus group interviewees made the example of the ---- Park in order to clarify that point:

“[...] if I don't feel that the thing, that the mountain is mine, I won't protect it [...]. I have realised the importance of this sentiment of appropriation of the space as well as of the natural element as a strategy to protect it. I think that this [aspect] is related to citizenship, to the sharing of the public good, and to the act of sharing in general because we always perceive this tense and conflictual relation between the property of the State and private property. It usually happens when state property is at stake. We don't feel that the road belongs to us [...]. This is the reason why we don't protect it, this is the reason why we have not been concerned with protection. Therefore, we did a small project here at the ----. Here there is a big popular neighbourhood. This neighbourhood causes a lot of problems to the public park, because the population nibbles and eats the park. They get the land and build up the houses; they enter the park, take the soil and build constructions inside the park [...]. So, this is a threatened zone. If we didn't protect it, people would build their houses inside the park. Although the public park is owned by the municipality, we [...] decided to get closer to the population. We directly talked with the local residents, we discussed any kind of issue, by asking them: 'what are your needs and problems. Why are you doing that?' And we realised that the real problem, as they said, was that 'the ---- is not ours'. A two-hectare big park was created, but the population did not agreed upon that. We worked one year with the population in order to restore those lands and make the population concerned with the park's environment, as well as to make people realise that there was not any place left to walk, that there was not a safe place for children during the day, that there was not a place to do a pic nic, that there were old people who could not go out from their houses because there were not paths where they could walk. Then, they understood that

they had many needs and that those needs could be satisfied by accessing and using that park. We regularly came back, we were ‘on the ground’ [...] and we helped the population to reappropriate their own territory. When the population started to reappropriate their own lands, by saying ‘yes, it belongs to the city, but we can also enjoy from it, [...] they started to do many things, they started to protect the park, and to plant on it.’ (Focus group interview, Association 4 member #5, October 17, 2015; emphasis added)

That is, whenever citizens consciously agree to share a public good, they are interested in learning how to manage, respect and protect it for this and future generations. Finally, according to the above-mentioned interviewee, people will be motivated to protect and take care of the environment only if they actually feel that nature is theirs, not only materially and economically but also *spiritually*.

6.3. Discussion

Having spelled out the main diagnostic, prognostic and motivational frames deployed by the social movements actors mentioned in the present empirical study, I now engage in a deeper investigation into the possible correlations among them.

In order to answer the first research question presented earlier in this empirical study, I will first consider the implications of these framing strategies for the construction of a broader sustainability narrative. Then I will summarise and analyse the content of the identified frames in order to clarify how the different social movements’ actors: (a) presented their diagnoses on the problems of sustainability affecting their respective countries; (b) formulated possible solutions to such problems; and (c) expressed the main motives for their resolution. After that, I will only focus on points (b) and (c). Indeed, by cross-tabulating the two variables, which I have called “prognosis” and “motivation”, my aim will be to label and classify the various positions expressed by these actors while discussing their engagement and activism in sustainability struggles. Further, I will try

to provide an answer to the second research question by examining the core moral-ethical aspects of the motivational frames articulated by the interviewed respondents. This is a fundamental step to assess the role of what I would call ‘eco-Islamic logic’ on the provision of meanings and motives for sustainability mobilisation and engagement in both the Moroccan and Tunisian case studies.

RQ3a: How do the social movement actors engaged in the Moroccan and Tunisian social movements for sustainability interpret, respond to, and find motives to tackle sustainability problems?

Framing sustainability

In both countries, the thought leaders, activists, and participants in the four selected case studies framed sustainability by placing emphasis on its comprehensive and holistic nature. Many respondents acknowledged the strict interrelation among its three basic elements — ecological, economic and social — while others stressed that there are also political, cultural, historic, geographic, health-related, economic-financial, and technical aspects related to contemporary sustainability issues. Further, they all inserted sustainability into a long-term horizon of time, with a specific focus on the future (e.g., future generations). Connected to this long-term perspective is the mode and direction of transmission (inter- and intra-generational), which is probably due to the cultural-educational practice of “passing on the message” from one generation to another. Sometimes, participants argued that sustainability entails the idea of persistence over time. That is, if something is sustainable, it is also durable and is able to continue over a long period of time. Additionally, sustainability initiatives have a spatial component, which may be local, national, regional, or global.

Another interesting element is that sustainability thinking was conceived by many respondents as something that allows people to fix a threshold for ensuring decent prospects of human survival as well as

for sustaining human creative evolution (through the development of science and technology, for example). Some respondents contended that it is important to balance the citizen's right to have his/her minimum basic needs satisfied and the right of natural resources to regenerate themselves. Searching for a deep connection with nature in everyday interactions was also regarded as a good way to live a meaningful and sustainable life. In order to find this harmony with nature, however, the human being should not dominate nature, because he himself is a fully integrated element of the natural world. Feeling with the heart, love, sensitivity, intuition, connection, and prayer were often presented as basic ecological virtues that may lead to spiritual refinement, human well-being, and ecological integrity. Taking care of nature as well as of the environment was considered by some respondents as the best expression of the principle of human respect toward the others. Finally, some respondents stated that human responsibilities toward nature and natural resources should be attained through a culture of civic participation and public sharing of the "natural commons".

Framing sustainability problems (diagnostic framing)

A thorough analysis of the diagnostic frames used by the thought leaders and participants in the four selected case studies reveals that sustainability problems were mainly said to be the result of unjust economic, ecological, social and cultural systems. Specifically, the identified diagnostic frames seem to convey the idea that social injustices and economic inequities, which actually dominate contemporary life, (1) have been committed by both State and non-State actors; and (2) mostly affect vulnerable groups (e.g., the local marginalised populations of a given country). Further, some diagnostic frames highlight that present-day social problems (e.g., poverty,

unemployment, lack of essential services, overpopulation, etc.) are interwoven not only with the economic injustices and inequalities generated by what I would call the ‘capitalist economic order’ (monetary greed, fraud and speculation, corruption, overconsumption/overproduction, etc.), but also with ecological injustices (resource depletion, pollution, deforestation, desertification, loss of biodiversity, etc.). In some diagnostic frames, the “capitalist economic order” is described as a centralised system whose main actors are depicted as selfish, aggressive, competitive and short-termist. These economic actors are said to be mostly preoccupied with profit-making, money accumulation and luxury. In a similar way, (urbanised, young) citizens are portrayed as dehumanized consumers who are deeply influenced by media and advertising.

Other diagnostic frames present the ecological crisis of the twenty-first century as the result of human disrespect toward nature and the environment. Humans have lost *contact* with nature and, most dramatically, they have not honoured the *contract* with nature. As a consequence, humans have indulged in reckless exploitation, depletion and waste of natural resources (e.g., fossil fuels), as well as in the despoilment of our natural heritage through pollution (by liquid, gas and solid pollutants), intensive agriculture (e.g., destruction of local seeds), and so on.

Thus, the general diagnosis here is that: (1) the prevalence of the economic factor over the other two factors (that is, the social and the ecological) has accelerated both a social/humanitarian crisis and the ecological destruction of the planet; (2) the political and social exclusion of citizens from public decision-making and enforcement has generated a permanent conflict between the property of the state and the “commons”.

Individual and collective action for sustainability (prognostic and motivational framings)

Clearly, all the framing elements found in the case studies and presented in the previous analysis appear to be linked to each other. More specifically, the prognostic and motivational frames I identified for each sustainability movement tend to converge around similar interpretative patterns. Some of the prognostic frames articulated by the different social movement actors seem to envision: (a) *a new economic system* based, for example, on renewable energy sources (e.g., solar and wind energy), as well as on new technologies used for the good of society; (b) *a new political-institutional system* in which the individual citizens are engaged in locally-based democratic deliberation and are allowed to propose socio-economic and environmental solutions that would be appropriate to local needs and conditions; (c) *a new social and cultural system* which would be characterised by simplicity of life; sharing of local traditions, experiences, and practices of sustainability; collective solidarity; “commoning” (i.e., the right to use the “commons”); and ecological learning models, projects, and initiatives, such as permaculture and seed saving, community gardens, farmer’s markets, and so forth.

Interestingly, some motivational frames include ethical-moral aspects. These ethical-moral motives are related, on the one hand, to spiritual and religious traditions and, on the other hand, to the fight for human/non-human rights. Figure 1 below schematically represents all these framing elements. Specifically, it illustrates and displays the prognostic and motivational frames that dominated the discussion on sustainability, as articulated by the four selected social movements operating in Morocco and Tunisia.

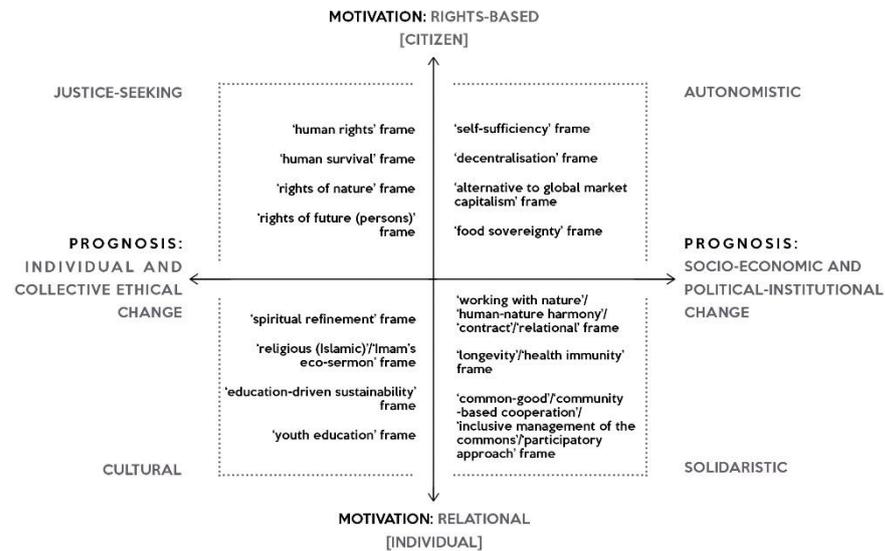


Figure 1 The frames used in the sustainability debate initiated by the four selected social movements

As shown in Figure 1 (which is adapted from Lindekilde 2015),⁹²⁴ I singled out two main prognoses and motivations. The first prognosis can be summarised as the search for an individual and collective change, which is mostly based on the ethical-moral drivers of sustainability. The second prognosis is the call for a social, economic, as well as for a political-administrative-institutional change at both the national and global levels. Further, I detected a “relational” motivation to sustainability engagement, which stresses the importance of building relationships, such as the relationship with the spiritual self, with nature, with other people, or with future generations. I also identified a “rights-based” reasoning and commitment to sustainability engagement and activism; it pertains to the importance of respecting human/non-human rights, such as the human rights to the “commons”, political

⁹²⁴ See Lindekilde, “Discourse and Frame Analysis,” 220.

participation and political deliberation rights, the rights of future generations as well as the rights of nature.

The cross-tabulation analysis resulted in the identification of four main triggers of social mobilisation for sustainability in the selected case studies. The two poles of the discussion on sustainability, which I have respectively called “autonomistic” and “solidaristic” positions, express the same vision — that is, to work for the common good — but they differ in terms of motivation. The “autonomistic” position has to do with the locally-based expansion of the civil, political, and environmental rights of citizens, whereas the “solidaristic” position is concerned with the individual depicted as a human being who lives in an interrelated, interdependent, and integral world. Both human survival and the human interdependence with nature and/or with future generations are thus given priority. In addition to “autonomistic” and “solidaristic” positions, the “justice-seeking” and the “cultural reawakening” positions present the issue of sustainability as the need for a renewed sense of moral-ethical responsibility. Yet these two positions are animated by two different motivations: the “justice-seeking” posture chiefly considers environmental rights, the rights of all living/non-living things and the rights of future generations as the pre-requisites for the full enjoyment of human rights. The “cultural reawakening” position, on the other hand, is concerned with reinvigorating and channelling the cultural traditions and religious-spiritual practices of a given society, with the goal of giving moral-ethical depth and resonance to sustainability mobilisation and activism.

RQ3b: How and to what extent is the “eco-Islamic” view stimulating new forms of self-governed collective engagement and action for sustainability in Morocco and Tunisia?

In order to address the second research question formulated above, I proceed with a more detailed analysis of the moral-ethical

dimensions of the motivational framings used by the selected respondents. As the previous framing analysis has revealed, people's need for justice and dignity, as well as their call for a universal respect of human/non-human rights are the main motivational sources of sustainability engagement and action. In this variegated motivational framework, the values and beliefs enshrined, for example, in Islamic 'theological eco-ethics' (i.e., the so-called "eco-Islamic" view, which I comprehensively described in Part I and II of the dissertation) appear to be *implicit yet deeply engrained motives for sustainable action*. Although all the social movements for sustainability chosen for this empirical study are non-religious and non-political, the "eco-Islamic" view has somehow informed their language. Especially in the two Moroccan case studies, the 'fabrication' of motives for mobilising sustainability engagement and action encompasses some (inter-)religious aspects. I refer, for example (1) to the story about the influential role played by the ---- imam's eco-sermon in teaching "eco-Islamic" values and principles to the local farmers trained in permaculture (*Association 1*); and (2) to the references made by some *Association 3* and *Association 4* members/participants to specific Quranic verses and/or prophetic teachings dealing with sustainability issues (e.g., the Islamic reward for planting trees; the concept of durability/sustainability from an Islamic perspective; efforts to practice *taqwá* through organic agriculture, etc.). Such illustrative examples may shed light on the positive contribution of Islamic environmental and socio-economic culture to grassroots social mobilisations for sustainability in Arab-Muslim contexts. Nevertheless, there is no trace

of an Islamic ecological/environmental movement in Morocco or Tunisia.⁹²⁵

While the Islamic ascendancy is easily discernible and traceable in contemporary Morocco, it is less likely that explicitly Islamic ‘theological eco-ethics’ could provide a strong rationale for sustainability engagement and activism in Tunisia. The Islamic ecological norms, rules, and teachings mentioned by the Tunisian respondents during the individual/focus group interviews can be regarded as simple explanatory devices. According to some Tunisian respondents, religious-spiritual credences are undoubtedly relevant, but they seem to constitute weak and collateral motives for sustainability engagement and action. In their view, since religious (namely, Islamic) public discourse has been often manipulated for political purposes, contemporary ecological thought and practice might include what I have called “eco-Islam”, but its moralising functions ought to be limited to the private-personal sphere. As a consequence, it is not difficult to infer that ‘eco-Islamic view’ is often invisible and inoperative in their public discussions on ecological/sustainability issues.

Furthermore, it is noteworthy that what I would call the ‘Islamic ecological model’ has been presented as just *one* among the available ‘eco-friendly’ cultural traditions. For instance, pre-Islamic, non-Arab, and non-Muslim ecological knowledge is said to offer valuable advice on how to manage communal (shared) resources in a more sustainable way. This amounts to saying that the ethical-moral foundations for sustainability engagement and activism in Arab-Muslim countries are not necessarily Islamic. Rather, they may arise from the creative

⁹²⁵ On this point, see, for example, Monika Zbidi, “Tunisia and the Islamic Environmental Movement III/III,” *Shaping the Humanities* (blog), July 12, 2013, accessed May 9, 2015, <http://blog.goethe.de/humanities/archives/14-Tunisia-and-the-Islamic-Environmental-Movement-III.html>.

synthesis of different cultural traditions, such as the indigenous tradition (e.g., the Berber tradition) or other non-native (Western) and continental (African) ecological traditions, trends, and movements.

6.4. Concluding remarks

In this chapter, I have presented my case study research based on the empirical findings obtained from the individual interviews and focus group discussions conducted with the selected respondents (cf. Chapter 5). This empirical part constitutes, indeed, the bulk of my dissertation research. I first analysed the diagnostic, prognostic, and motivational framings employed by the respondents when discussing sustainability-related issues. Such analytical efforts were also aimed at detecting the impact of the so-called “eco-Islamic” view on motivation. By looking at the motivational framing strategies deployed by the respondents of the sample, my basic aim was to understand whether, and to what extent, the “eco-Islamic” view could provide normative and/or practical reasons for individual as well as collective mobilisation and action for sustainability. The findings of this study showed that the “eco-Islamic” view at best played *a facilitating role* in the respondents’ comprehension of and response to present-day sustainability problems. Further, based on the evidence collected, the “eco-Islamic” view had a *latent and passive influence* on people’s ethical-moral motives. Hence, the real motives behind sustainability engagement and activism in Morocco and Tunisia did not seem to be explicitly linked to a religious (e.g., Islamic) eco-ethics or eco-theology of sustainability. The most important motives for sustainability mobilisation and action focused on: (1) guaranteeing human health and survival (*biological-anthropocentric motives*); (2) social peace, economic empowerment and community participation in the sharing of the “commons” (*socio-economic motives*); (3) ecological restoration (*environmental motives*);

(4) in some cases, a deep desire for love, spiritual refinement, transformation and regeneration served as a strong motivational trigger to engage people in sustainability action (*spiritual motives*). To conclude, it is fundamental to stress that this type of eco-spirituality is not overtly religious, though of course it may draw on well-established religious traditions like Islam.

Conclusion

In the present thesis, sustainability is mainly viewed as the fulcrum of present-day socio-ecological transitions not only in Arab/non-Arab Muslim-majority societies, but in all world societies. The use of the term “socio-ecological” as an attribute of these new transitions also reminds us that people’s ecological perspectives are often mediated by their socio-cultural worldviews. That is, the way people see and imagine ecology and nature basically corresponds to the way they conceive or envision their ideal social system and cultural life. If these premises are true, then human action toward sustainability — which, it seems to me, is one of the major factors of change within most contemporary societies — can be defined as the result of long-term socio-ecological processes involving both single individuals and social groups. Surely, these various social actors, whether they work in permaculture or for ecosystem conservation/protection projects, help themselves and others face small-scale, day-to-day ecological and socio-economic problems. By doing that, they actually act upon their own society and its cultural values and norms. Accordingly, sustainability for them is a path, not a predefined goal that needs to be achieved by a certain period of time.

Furthermore, although it is reasonable to say that the possible solutions to the current ecological crisis would not emerge in a socio-ecological and cultural vacuum, it is equally appropriate to argue that today’s societies and their members are not perfectly equipped to deal with global-scale sustainability problems, especially climate change. These are thorny issues that raise additional moral-ethical dilemmas with respect to the causes of and responses to contemporary socio-ecological disasters. Some people may ask themselves questions like: “if nature and human societies are despoiled, how much moral-ethical responsibility falls to humans?” Similar quandaries also raise the

question as to how to re-establish a healthy and balanced relationship between human beings and their own environment.

All the major world's religions, including Islam, have been particularly concerned with the same questions. As argued in this thesis, religion and ecology are interrelated dimensions for the very fact that they both strive for a reconciliation between human beings and nature; more specifically, they both claim to offer people moral-ethical resources to tackle the current ecological crisis (cf. Section I). Further, since religious worldviews can mould society by influencing its economic system and ecological history, it seems that religion, ecology, and economy are closely related to each other. Indeed, some religious traditions have provided and prescribed rules of ecological thinking and economic behaviour, as well as coordination mechanisms that may contribute to the cooperative and sustainable management of natural and environmental resources (i.e., the “natural/environmental commons”). This also points to the relation between religion, ecology and the so-called “economy of the commons” (cf. Section II). In the specific case of Islam, as explained in Chapter 2, the Islamic eco-ethical and eco-theological views and ideologies — some of which have recently inspired the creation of a global(ised) Muslim and Islamic sustainability movement — have actually provided ‘ethical-moral healing’ to some of its adherents. Consequently, groups of committed eco-Muslims have hybridised ecological thoughts, lifestyles, and practices (e.g., veganism/vegetarianism, animalist thought, etc.) in order to accommodate them within the Islamic doctrine, and vice versa. In addition, as examined in Chapter 4, some Islamic economic and social principles for the sustainable management of communal (shared) resources (e.g., the hima management system) may still be reapplied today in new ways, not only in predominantly Muslim contexts, but also in the rest of the world. Thus, I would argue that Islamic eco-ethics is a

dynamic system of thought that has partially encouraged some organised Muslims (although still only an elite) to adopt a more environmentally sustainable way of life at both the individual and societal levels. Islamic-based ecological declarations, initiatives, and practices provide rich evidence of the pivotal role Islamic eco-ethics has played in motivating people to mobilise themselves and engage with local/global sustainability movements. Further, I would stress that, although there is still much work to do in protecting communal resources in the MENA region, the Islamic principles informing what has been called the Islamic “commons-economy” have been partially retrieved and reactualised in predominantly Muslim-contexts.

However, in contemporary Arab-Muslim countries, such as Morocco and Tunisia, there are also *non-religious* social movements for sustainability (cf. Section III). The representatives of these movements contend that socio-ecological transitions can be effectively realised through both individual and collective mobilisation and action for sustainability, especially at the local level. These activists frame their grassroots struggles as economic, social, and cultural battles against human selfishness and unfettered dominion over nature, or against unsustainable economic growth and savage capitalism’s greed-driven systems. Perhaps the most important issue they face is the urgent need to find a balance between: (1) the right to human existence, flourishing and evolution; and (2) the human responsibilities toward the planet, and, above all, toward the (ecological) “others”, whether they be plants, animals, ecosystems, or future generations.

In order to respond to such sustainability challenges and, consequently, to recruit people to their cause, the thought leaders and activists of these movements and/or (networks of) associations, either explicitly or implicitly, draw on a wide range of moral-ethical messages. In many circumstances, the most active members of these

movements try to convey a sense of ecological responsibility and moral-ethical commitment to eco-justice matters. An instance of this phenomenon is evidenced in their *duty-based* and *rights-based morality*, which is predominant and, it seems to me, beneficial to present-day sustainability mobilisation and activism. In these social movements, however, some ordinary participants (e.g., local farmers) are mainly — and legitimately — motivated by economic-material interests, such as maintaining their families and improving their socio-environmentally vulnerable communities. Nevertheless, shifting the focus from the provision of economic incentives to beneficiaries (e.g., cost-free organic certification, land redistribution, donation of trees, etc.) to the progressive construction of locally-shared ecological values is and remains an important objective for these sustainability movements. In addition, it should be noted that the spiritual-religious core values these people might endorse are just a small segment of their complex moral universe. This is testified, as evidenced in my empirical study (see Chapter 6), by the limited yet positive contribution of Islamic ecological values and principles to the configuration of people's moral-ethical motives for sustainability engagement and action.

There is another aspect of the issue, though, that concerns me as well. The ecological projects and initiatives promoted by the overtly secular sustainability movements selected for the empirical study presented in Chapter 6, as already stated, are chiefly aimed at forging “eco-citizens” and fostering civic-democratic participation through ecological sustainability activities. Their main goal is to create stable, cooperative, and sustainable local communities and organisations whose members can hopefully be more autonomous, socially resilient and economically self-sufficient than before. This standpoint illuminates the fact that the political, social, and economic problems of some Arab-Muslim countries can also be explained through the study

of their citizens' grassroots ecological struggles. Deciphering popular complaints and grievances in this domain offers unexpected insights into the strong correlation between political instability, social conflict, and economic unrest on the one side, and ecological depletion, on the other. The same approach can be systematically applied and extended to other countries of the MENA region.

For instance, Lebanon's recent garbage crisis (2015–16)⁹²⁶ and, two years before, the Gezi Park protests in Istanbul (Turkey)⁹²⁷ seem to prove that environmental grassroots movements for sustainability have opened a Pandora's box. National (and, in most cases, local) political-economic elites have been highly criticised by citizens and civil society organisations for not being able, or willing, to work for the public good or in its interest. Whenever these 'eco-protesters' call either for direct participatory democracy, or for a more collaborative governance of the "commons" (e.g., public streets and public parks), they are actually defending their political, civil, cultural, socio-economic, and environmental rights. In my view, this is the real novelty brought about by these new social movements. Thus, contemporary 'garbage wars' and civic battles for defending green urban spaces can be considered as local ecological struggles but, at the same time, they can be regarded as political acts of freedom, justice, and peace.

To sum up, the present thesis clarifies that contemporary socio-ecological transitions have been led by new social movements, i.e., social movements for sustainability. On the one hand, a portion of this "green activist energy" has been deployed by several types of "eco-

⁹²⁶ See Sami Atallah, "Garbage Crisis: Setting the Record Straight," The Lebanese Center for Policy Studies (LCPS), August 2015, accessed September 5, 2015, <http://www.lcps-lebanon.org/featuredArticle.php?id=48>.

⁹²⁷ See Constanze Letsch, "Turkey protests spread after violence in Istanbul over park demolition," *The Guardian*, June 1, 2013, accessed June 9, 2016, <https://www.theguardian.com/world/2013/may/31/istanbul-protesters-violent-clashes-police>.

Islamic movements”, i.e., sustainability movements that are explicitly guided or inspired by the contemporary Islamic eco-ethical and eco-theological views illustrated in Chapter 2. These sustainability movements and ENGOs engage an increasing number of “eco-Muslims” who live and work either in Muslim-majority countries or in Western countries (Europe, US, Canada, etc.). On the other hand, in Arab-Muslim countries (and elsewhere in the Muslim world) there are ostensibly secular sustainability movements, which were the objects of my empirical study.

In this second case, notwithstanding the fact that some of their members are Muslim practitioners, the global-scale reinvigoration of an Islamic “green religion” is neither a primary nor a manifest concern for them. Yet, their occasional use of religious terms, as well as of Quranic verses and prophetic traditions when referring to some ecological concepts and practices seems to prove that the Islamic cultural heritage may have helped them frame certain sustainability issues, problems and solutions. Interestingly, however, theirs mostly appears to be an *unconscious and implicit* religious-spiritual drive, which therefore has *indirectly motivated* sustainability engagement and action in those contexts.

This significant empirical result also implies that, as observed by Johnston in reference to his recent study on sustainability movements in the US, “if sustainability indeed grows into a long-term cultural project, it is probable that some of the religious imagery, language and metaphors tied to it will be some of the most successful spiritual tropes over time”.⁹²⁸ Still, as he tells us, “green religions may be helpful starting places for motivating adherents to begin thinking differently

⁹²⁸ Johnston, *Religion and Sustainability*, 202.

about individual behaviours, but green religions *themselves* are not the answers to adapting to ecological and social problems”.⁹²⁹

Thus, the present thesis led me to conclude that so-called “eco-Islam” is just one side of the coin. Secular sustainability movements are the other. In Arab-Muslim countries, as previously noted, there are many sustainability-oriented movements that are non-religious (and non-Islamic). They promote social change, ecological respect and political-economic decentralisation by spreading a broader and more pluralistic sustainability narrative. The latter may include some religious dimensions, which, however, seem to be incidental to their public deliberations on sustainability matters. Thus, the collected stories narrated by these social actors reveal an ecological spirituality that is not necessarily religious or religiously-derived.

In conclusion, future research in this area should further investigate the additional moral-ethical motives that may help sustainability movements produce a shift in people’s values, perceptions and worldviews. Indeed, I believe that bringing about this fundamental shift is the primary mission of contemporary socio-ecological transitions in the Muslim context and in the world at large.

⁹²⁹ Ibid.

Bibliography

Books

- Abdel Haleem, Harfiya, ed. *Islam and the Environment*. London-New York: Ta-Ha Publishers, 1998.
- Abdul-Matin, Ibrahim. *Green Deen: What Islam Teaches about Protecting the Planet*. Oakland, California: Berrett-Koehler Publishers, 2010.
- Agwan, A.R. *The Environmental Concern of Islam*. New Delhi: Institute of Objective Studies, 1992.
- Agwan, A.R., ed. *Islam and the Environment*. New Delhi: Institute of Objective Studies, 1997.
- Albanese, Catherine L. *Nature Religion in America: From the Algonkian Indians to the New Age*. Chicago: University of Chicago Press, 1990.
- Al-Bayhāqī, Aḥmad Ibn al-Ḥusayn. *Sunan al-Bayhaqī al-Kubrā*. Hyderabad, India: n.d.
- Al-Ghazālī, Abū Ḥāmid. *Al-Ḥikmah fī Makhlūqāt Allāh*, edited by Muḥammad Rashīd Riḍā al-Qabbānī. Bayrūt: Dār Iḥyā' al-'Ulūm, 1978.
- Ali, Abdullah Yusuf. *The Holy Quran: Text, Translation and Commentary*, US edn. Elmhurst, New York: Tahrike Tarsile Qur'an Inc., 1987.
- Al-Mawardi, Abu al-Hasan Ali. *Al-Ahkam al-Sultaniyyah*. Beirut: Dar al-Kutub Ilmiah, 1999.
- Al-Qaraḍāwī, Yūsuf. *Environmental Protection in Islam (Ri'ayāt al-bī'ah fī Sharī'at al-Islām)*. Al-Qāhirah: Dār al-Shurūq, 2001.
- . *Al-Sunnah Maṣdar lī'l-Ma'rīfah wa'l-hadhārah*, 3rd edn. Al-Qāhirah: Dār al-Shurūq, 2002.
- Al-Sadr, Muhammad Baqir. *Iqtisādunā* ("Our Economics"). Bayrūt: Dār al-Ta'āruf li'l-Maṭbu'āt, 1982.
- Al-Tibrīzī, Muḥammad ibn 'Abd Allāh Khaṭīb. *Mishkāt al-Masābih*; English translation with explanatory notes by James Robson. Lahore: S.M. Ashraf, 1975.
- Altomonte, Carlo, and Massimiliano Ferrara, eds. *The Economic and Political Aftermath of the Arab Spring: Perspectives from Middle East and North African Countries*. Cheltenham, UK: Edward Elgar, 2014.
- Amara, Ahmad, Abu-Saad, Ismael, and Oren Yiftachel, eds. *Indigenous (In)Justice: Law and Human Rights for Bedouin Arabs in the Naqab*. Cambridge: The Human Rights Program, Harvard Law School, Harvard University Press, 2012.
- Ammar, Nawal H. "Restorative Justice in Islam: Theory and Practice." In *The Spiritual Roots of Restorative Justice*, edited by Michael L.

- Hadley, 161–80. Albany, NY: State University of New York Press, 2001.
- Anderson, Terry L., and Donald R. Leal. *Free Market Environmentalism*. New York: Palgrave, 2001.
- Askari, Hossein, Iqbal, Zamir, and Abbas Mirakhor. *Introduction to Islamic Economics: Theory and Application*. Singapore: John Wiley & Sons, 2015.
- Azzone, Giovanni Felice. *La moralità come adattamento: altruismo degli animali e moralità degli esseri umani*. Milano: Zadig ed., 2002.
- Barber, Benjamin R. *Strong Democracy: Participatory Politics for a New Age*, Twentieth-Anniversary Edition, With a New Preface. Oakland, CA: University of California Press, 2004.
- Bauman, Whitney, Bohannon, Richard, and Kevin J. O'Brien, eds. *Grounding Religion: A Field Guide to the Study of Religion and Ecology*. New York: Routledge, 2011.
- Beinin, Joel, and Frédéric Vairel, eds. *Social Movements, Mobilization, and Contestation in the Middle East and North Africa*. Stanford, CA: Stanford University Press, 2011.
- Berkes, Fikret, ed. *Common Property Resources: Ecology and Community-based Sustainable Development*. London, UK: Belhaven Press, 1989.
- Berry, Thomas. *The Great Work: Our Way Into the Future*. New York: Bell Tower Press, 1999.
- Birks, M., and J. Mills, *Grounded theory: A practical guide*. Thousand Oaks, CA: Sage Publications, 2011.
- Birnbacher, Dieter, and May Thorseth, eds. *The Politics of Sustainability: Philosophical Perspectives*. Abingdon, Oxon; New York, NY: Routledge Studies in Sustainability, 2015.
- Biswas, Asit K., Rached, Eglal, and Cecilia Tortajada, eds. *Water as a Human Right for the Middle East and North Africa*. Ottawa, Canada: Routledge, IDRC, 2008.
- Boykoff, Maxwell T., ed. *The Politics of Climate Change: A Survey*. London: Routledge, 2010.
- Bullard, Robert D. *Dumping in Dixie: Race, Class, and Environmental Quality*. Boulder, CO: Westview Press, 1990.
- Callicott, J. Baird, and Roger T. Ames, eds. *Nature in Asian Traditions of Thought: Essays in Environmental Philosophy*. Albany: State University of New York Press. Albany, NY: SUNY Press, 1989.
- Chamberlain, Gary L. *Troubled Waters: Religion, Ethics, and the Global Water Crisis*. Lanham: Rowman & Littlefield Publishers, 2008.
- Chapra, Muhammad Umer. *Islam and Economic Development: A Strategy for Development with Justice and Stability*. Islamabad,

- Pakistan: International Institute of Islamic Thought and Islamic Research Institute, 1993.
- Dalton, Russell J., and Manfred Kuechler, eds. *Challenging the Political Order: New Social and Political Movements in Western Democracies*. New York: Oxford University Press, 1990.
- Dasgupta, Partha. *Human Well-being and the Natural Environment*. Oxford: Oxford University Press, 2004.
- Davis, Joseph E., ed. *Stories of Change: Narrative and Social Movements*. Albany, NY: SUNY Press, 2002.
- Deane-Drummond, Celia, and Heinrich Bedford-Strohm, eds. *Religion and Ecology in the Public Sphere*. London: Continuum/T&T Clark International, 2011.
- d'Eaubonne, Françoise. *Le Féminisme ou la mort*. Paris: Pierre Horay, 1974.
- Della Porta, Donatella, and Mario Diani. *Social Movements: An Introduction*. Malden, MA: Blackwell Publishing, 1999; 2nd edn. 2006.
- Dietzel, Irene. *The Ecology of Coexistence and Conflict in Cyprus: Exploring the Religion, Nature, and Culture of a Mediterranean Island*. Boston/Berlin/Munich: de Gruyter, 2014.
- Drache, Daniel, ed. *The Market or the Public Domain: Global Governance and the Asymmetry of Power*. London: Routledge, 2001.
- Eaton, Heather. *Introducing Ecofeminist Theologies*. London: T & T Clark, 2005.
- Ecologist, The. *Whose Common Future?: Reclaiming the Commons*. Gabriola Island, B.C.: New Society Publishers, 1993.
- Eder, Klaus. *The New Politics of Class: Social Movements and Cultural Dynamics in Advanced Societies*. New York: SAGE, 1993.
- Edwards, Denis, and Mark Worthing, eds. *Biodiversity and Ecology as Interdisciplinary Challenge*. Australian Theological Forum Press, 2004.
- Eğri, Taha, and Necmettin Kızılkaya, eds. *Islamic Economics: Basic Concepts, New Thinking and Future Directions*. Cambridge Scholars Publishing, 2015.
- Ehrlich, Paul R. *The Population Bomb*. New York: Ballantine Books, 1968.
- Emery, Fred. *Futures we are in*. Leiden, the Netherlands: H. E. Stenfert Kroese B.V., 1977.
- Emery, Merrelyn. *Searching: The theory and practice of making cultural change*. Amsterdam, The Netherlands/Philadelphia, PA, USA: John Benjamins Publishing Company, 1999.

- Engel, J. Ronald, and Joan Gibb Engel, eds., *Ethics of Environment and Development: Global Challenge, International Response*. Tucson, AZ: University of Arizona Press, 1990.
- Esping-Andersen, Gøsta. *The Three Worlds of Welfare Capitalism*. Cambridge: Polity Press, 1990.
- Esposito, John L. *What Everyone Needs to Know about Islam*. New York: Oxford University Press, 2002.
- _____. *The Oxford Dictionary of Islam*, edited by John L. Esposito. New York: Oxford University Press, 2003.
- Faruqui, N. I., Biswas, A.K., and M.J. Bino. *Water management in Islam*. Tokyo: United Nations University Press, 2001.
- Foltz, Richard C. *Environmentalism in the Muslim World*. New York, NY: Nova Science Publishers, 2005a.
- _____. *Animals in Islamic Traditions and Muslim Cultures*. Oxford: Oneworld Publications, 2014.
- Foltz, Richard C., ed. *Worldviews, Religion and the Environment: A Global Anthology*. Australia; Belmont, CA: Thomson/Wadsworth Publishing, 2003a.
- Foltz, Richard C., Denny, Frederick M., and Azizan Baharuddin, eds. *Islam and Ecology: A Bestowed Trust*. Cambridge, Mass.: Center for the Study of World Religions, Harvard Divinity School. Distributed by Harvard University Press, 2003b.
- Francesca, Ersilia. *Economia, religione e morale nell'islam*. Carocci, Roma, 2013.
- Gardner, Gary. *Inspiring Progress: Religions' Contributions to Sustainable Development*. New York and London: W.W. Norton & Co., 2006.
- Glacken, Clarence J. *Traces on the Rhodian Shore: Nature and Culture in Western Thought from Ancient Times to the End of the Eighteenth Century*. Berkeley: University of California Press, 1967.
- Global Peace Initiative of Women (GPIW). *Sacred Seeds: A Collection of Essays*, Introduction by Dr. Vandana Shiva. Ed. Point Reyes Station, CA, USA: The Golden Sufi Center, 2014.
- Goffman, Erving. *Frame Analysis: An Essay on the Organization of Experience*. New York: Harper & Row, 1974.
- Gökçekus, Hüseyin, Türker, Umut, and James W. LaMoreaux, eds. *Survival and Sustainability: Environmental concerns in the 21st Century*. Heidelberg, Dordrecht, London, New York: Springer Science & Business Media, 2011.
- Gomaa, Ali. *Environmentalism and Islamic Perspective*. Cairo: Al-Wabel Al-Sayyeb, 2009.
- Goodenough, Ursula W. *The Sacred Depths of Nature*. Oxford-New York: Oxford University Press, 1998.

- Goodwin, Jeff, and Jasper, James M., eds. *Rethinking Social Movements: Structure, Culture, and Emotion*. Lanham, MD: Rowman & Littlefield Publishers, 2004.
- _____. *The Social Movements Reader: Cases and Concepts*, 3rd edition. New York: Wiley Blackwell, 2015.
- Gopalakrishna, Chennat, Tortajada, Cecilia, and Asit K. Biswas. *Water Institutions: Policies, Performance and Prospects*. Berlin-Heidelberg: Springer Verlag, 2005.
- Gottlieb, Roger S. *A Greener Faith: Religious Environmentalism and Our Planet's Future*. New York, NY: Oxford University Press, 2006a.
- _____. *Engaging Voices. Tales of Morality and Meaning in an Age of Global Warming*. Waco: Baylor University Press, 2011.
- _____. *Spirituality: What It Is and Why It Matters*. Oxford: Oxford University Press, 2012.
- Gottlieb, Roger S., ed. *The Oxford Handbook of Religion and Ecology*. New York, NY: Oxford University Press, 2006b.
- Granberg-Michaelson, Wesley. *Ecology and Life: Accepting Our Environmental Responsibility*. Waco: Word Books, 1988.
- Hailwood, Simon. *Alienation and Nature in Environmental Philosophy*. Cambridge, UK: Cambridge University Press, 2015.
- Hammersley, Martyn. *What is Qualitative Research?* London: Bloomsbury Academic, 2013.
- Harvey, David. *The New Imperialism*. New York: Oxford University Press, 2003.
- Harvey, Graham. *Contemporary Paganism: Listening People, Speaking Earth*. New York: New York University Press, 1997.
- Herrera, Pedro M., Davies, Jonathan, and Pablo Manzano Baena, eds. *The Governance of Rangelands: Collective Action for Sustainable Pastoralism*. London: Earthscan-Routledge, 2014.
- Hessel, Dieter T., ed. *After Nature's Revolt: Eco-Justice and Theology*. Minneapolis: Fortress Press, 1992.
- Hübschen, Katja. *Integrated Water Resources Management as a Governance Challenge for Countries of the Middle East with Special Focus on Yemen, Jordan and Syria*. Berlin: Logos Verlag, 2011.
- Ibn 'Abd al-Salām, 'Izz al-Dīn. *Qawā'id al-aḥkām fī maṣāliḥ al-anām* ("Rules for Judgment in the Cases of Living Beings"). Dimashq: Dār al-Ṭabbā', 1992.
- Iqbal, Munawar. *The Environmental Dimensions of Islam*. Cambridge: The Lutterworth Press, 2000.
- Iqbal, Munawar, ed. *Islamic Perspectives on Sustainable Development*. New York: Palgrave Macmillan, 2005.

- Jalil, Abdullaah, Ramli, Asharaf Mohd, and Shahwan, Syahidawati. *The Four Introductory Theories of Fiqh Muamalat*. Nilai, Negeri Sembilan, Malaysia: Wisdom Publication, 2014. Accessed May 19, 2016, <https://comaif.files.wordpress.com/2014/02/2014-02-19-the-4-intro-theories-of-fm-master-copy.pdf>.
- Jamieson, Dale, ed. *A Companion to Environmental Ethics*. Oxford, UK; Malden, Mass., USA: 2003.
- Janmohamed, Shelina. *Generation M: Young Muslims Changing the World*. London: I.B. Tauris, 2016.
- Johnston, David L. *Earth, Empire, and Sacred Text: Muslims and Christians as Trustees of Creation*. Sheffield: Equinox, 2013 [2010].
- Johnston, Hank, and Klandermans, Bert, eds. *Social Movements and Culture*. London: Routledge, 1995.
- Johnston, Lucas F. *Religion and Sustainability: Social Movements and the Politics of the Environment*. Sheffield, UK: Equinox Publishing Ltd., 2013.
- Kamali, Mohammed Hashim. *Equity and Fairness in Islam*. Cambridge: The Islamic Texts Society, 2005.
- Kaufman, G., ed. *Theology for a Nuclear Age*. Manchester, UK: Manchester University Press, 1985.
- Kearns, Laurel, and Keller, Catherine, eds. *Ecospirit: Religions and Philosophies for the Earth*. New York: Fordham University Press, 2007.
- Keller, David R., ed. *Environmental Ethics: The Big Questions*. New Jersey: Wiley-Blackwell, 2010.
- Khalid, Fazlun, ed. *Qur'an: Creation and Conservation. An Introduction to the Ethical Foundations of Islamic Environmentalism*. Birmingham, UK: Islamic Foundation for Ecology and Environmental Sciences – IFEES, 1999. Accessed January 20, 2015. <http://www.ifees.org.uk/wp-content/uploads/2015/04/1380144345.pdf>.
- Khalid, Fazlun, and Joanne O'Brien, eds. *Islam and Ecology* (World Religions and Ecology Series). New York: Cassell, 1992.
- Khan, Muhammad Akram. *Riba in Contemporary Literature*. Lahore, Pakistan: Islamic Publications, 1983.
- Kneen, Brewster. *The Tyranny of Rights*. Ottawa, Canada: The Ram's Horn, 2009.
- Kopelman, Shirli, Weber, J. Mark, and David M. Messick. "Factors Influencing Cooperation in Commons Dilemmas: A Review of Experimental Psychological Research." In *The Drama of the Commons, Committee on the Human Dimensions of Global Change, National Research Council*, edited by Elinor Ostrom, Thomas Dietz, Nives Dolsak, Paul C. Stern, Susan Stonich, and

- Elke U. Weber, 113–56. Washington, D.C.: National Academy Press, 2002.
- Kraft, Kenneth, ed. *Inner Peace, World Peace: Essays on Buddhism and Nonviolence*. Albany, New York: State University of New York Press, 1992.
- Kram, Noa. “The Naqab Bedouins: Legal struggles for land ownership rights in Israel.” In *Indigenous (In)Justice: Law and Human Rights for Bedouin Arabs in the Naqab*, edited by Amara A., Abu-Saad I., and Yiftachel O., 99–124. Cambridge: The Human Rights Program, Harvard Law School, Harvard University Press, 2012.
- Kraus, Christiane. *Import Tariffs as Environmental Policy Instruments*. Dordrecht, The Netherlands: Kluwer Academic Publishers, 2000.
- Lambton, Ann S. K. *Landlord and Peasant in Persia: A Study of Land Tenure and Land Revenue Administration*. London-New York: I.B. Tauris & Co. Ltd., 1991.
- Latour, Bruno. *Politics of Nature: How to Bring the Sciences into Democracy*. Translated by Catherine Porter. Harvard: Harvard University Press, 2004.
- Leach, John. *A Course in Public Economics*. Cambridge: Cambridge University Press, 2004.
- Leckie, Gloria J., Given, Lisa M., and John E. Buschman. *Critical Theory for Library and Information Science: Exploring the Social from Across the Disciplines*. Santa Barbara, CA: ABC-CLIO, 2010.
- Lee, Alfred M., ed. *Principles of Sociology*. New York: Barnes & Noble, 1969.
- Lovelock, James E. *Gaia: A New Look at Life on Earth*. New York: Oxford University Press, 1979.
- _____. *The Ages of Gaia: A Biography of Our Living Earth*. New York: New York: W. W. Norton & Company, 1988.
- _____. *Homage to Gaia: The Life of an Independent Scientist*. London: Oxford University Press, 2000.
- Luomi, Mari. *Managing Blue Gold: New Perspectives on Water Security in the Levantine Middle East*. Helsinki: The Finnish Institute of International Affairs Ulkopoliittinen instituutti, FIIA Report 25, 2010.
- Luqman, Zakariyah. *Legal Maxims in Islamic Criminal Law: Theory and Applications*. Leiden: Brill-Nijhoff, 2015.
- Maffettone, Sebastiano. *Rawls: An Introduction*. Cambridge, UK; Malden, MA, USA: Polity Press, 2010.
- Mason, Martin R. *Doomsday Scenarios*. UK, US, Canada: Lulu.com, 2015.
- Masri, Al-Hafiz B.A. *Islamic Concern for Animals*. Petersfield, Hants, England: Athene Trust, 1987.

- Mawdūdī, Abū 'l-A'īā. *The Economic Problem of Man and its Islamic Solution*, 5th edn. Lahore, Pakistan: Islamic Publications, 1978.
- McDaniel, Jay B. *Earth, Sky, Gods and Mortals: Developing an Ecological Spirituality*. Mystic, Conn.: Twenty-Third Publications, 1990.
- McFague, Sally. *The Body of God: An Ecological Theology*. Minneapolis, MN: Fortress, 1993.
- McNeill, William H. *Plagues and Peoples*. New York: Anchor Books, 1976.
- Melucci, Alberto. *Nomads of the Present*. London: Hutchinson Radius, 1989.
- _____. *Challenging Codes: Collective Action in the Information Age*. Cambridge: Cambridge University Press, 1996.
- Mill, John Stuart. *Principles of Political Economy*, edited by James Laurence Laughlin. New York: D. Appleton & Co., 1884.
- Mollison, Bill, and David Holmgren. *Permaculture One: A Perennial Agricultural System for Human Settlements*. Sisters Creek, Australia: Tagari Publications, 1978.
- Mushtaq, Ahmad. *Business Ethics in Islam*. Islamabad: The International Institute of Islamic Thought, 1995.
- Najam, Adil, Halle, Mark, and Ricardo Meléndez-Ortiz, eds. *Envisioning a Sustainable Development Agenda for Trade and Environment*. New York: Palgrave Macmillan, 2007.
- Naqvi, Syed Nawab Haider. *Ethics and Economics: An Islamic Synthesis*. Leicester, UK: U.K.: Islamic Foundation, 1981.
- Nash, Roderick F. *Wilderness and the American Mind*. Connecticut: Yale University Press, 1967.
- Nasr, Seyyed Hossein. *The Encounter of Man and Nature. The Spiritual Crisis of Modern Man*. London: George Allen and Unwin, 1968.
- _____. *An Introduction to Islamic Cosmological Doctrines*. London: Thames and Hudson Press, 1978.
- _____. *Religion and the Order of Nature*. New York: Oxford University Press, 1996.
- Nohria Nitin, and Rakesh Khurana. *Handbook of Leadership Theory and Practice: A Harvard Business School Centennial Colloquium*. Boston, Mass.: Harvard Business Press, 2010.
- Oelschlaeger, Max. *The Idea of Wilderness: From Prehistory to the Age of Ecology*. New Haven: Yale University Press, 1991.
- Olson, Mancur. *The Logic of Collective Action: Public Goods and the Theory of Groups*. Cambridge, Mass.: Harvard University Press, 1971 [1965].
- Ostrom, Elinor. *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge, UK: Cambridge University Press, 1990.

- Ostrom, Elinor, Gardner, Roy, and James Walker. *Rules, Games, and Common-Pool Resources*. Ann Arbor, MI: The University of Michigan Press, 1994.
- Ostrom, Elinor, Dietz, Thomas, Dolsak, Nives, Stern, Paul C., Stonich, Susan, and Elke U. Weber, eds. *The Drama of the Commons: Committee on the Human Dimensions of Global Change, National Research Council*. Washington: National Academy Press, 2002.
- Özdemir, İbrahim. *The Ethical Dimension of Human Attitudes Towards Nature: A Muslim Perspective*. Merter/Istanbul: Insan Publications, 2nd edn., 2008.
- Pepper, David. *Eco-Socialism: From Deep Ecology to Social Justice*. London-New York: Routledge, 1993.
- Plumwood, Val. *Feminism and the Mastery of Nature*. London: Routledge, 1993.
- _____. *Environmental Culture: The Ecological Crisis of Reason*. New York: Routledge, 2002.
- Polanyi, Karl. *The Great Transformation: Politische und ökonomische Ursprünge von Gesellschaften und Wirtschaftssystemen*. Frankfurt am Main, Germany: Suhrkamp Verlag, 1978.
- _____. *The Great Transformation: The Political and Economic Origins of Our Time*. Boston: Beacon Press, 2001 [1944].
- Pope Francis. *Praise Be to You - Laudato Si': On Care for Our Common Home*, hardback edition. Vatican City: Libreria Editrice Vaticana - San Francisco: Ignatius Press, 2015.
- Prugh, Thomas, Costanza, Robert, and Herman Daly. *The Local Politics of Global Sustainability*. Washington, D.C.: Island Press, 2000.
- Quadir, Tarik M. *Traditional Islamic Environmentalism: The Vision of Seyyed Hossein Nasr*. Lanham, MD; Plymouth, U.K.: Rowman & Littlefield Publishers/University Press of America, 2013.
- Qutb, Sayyid. *Social Justice in Islam*. Translated by J.D. Hardie. New York: American Council of Learned Societies, 1970 [1948].
- Rappaport, Roy A. *Ecology, Meaning, and Religion*. Richmond, CA: North Atlantic Books, 1979.
- Rasmussen, Larry L. *Earth Community, Earth Ethics*. Maryknoll, NY: Orbis Books, 1996.
- Rawls, John. *Collected Papers*, edited by Samuel Freeman. Cambridge, MA: Harvard University Press, 1999.
- Reid, Sian, ed. *Between the Worlds: Readings in Contemporary Neopaganism*. Toronto, ON, Canada: Canadian Scholars Press, 2006.
- Rockefeller, Steven C., and John C. Elder, eds. *Spirit and Nature: Why the Environment Is a Religious Issue*. Boston, MA: Beacon Press, 1992.

- Rodgers, Christopher P., Straughton, Eleanor, Winchester, Angus J.L., and Margherita Pieraccini. *Contested Common Land: Environmental Governance Past and Present*. London: Earthscan, 2011.
- Rolston, Holmes, III. *Philosophy Gone Wild: Essays in Environmental Ethics*. Amherst, NY: Prometheus Books, 1986.
- Rozzi, Ricardo, Pickett, Steward T.A., Palmer, Clare, Armesto, Juan J., and J. Baird Callicott, eds. *Linking Ecology and Ethics for a Changing World: Values, Philosophy, and Action*. Dordrecht: The Netherlands: Springer, 2013.
- Ruether, Rosemary R. *Gaia and God: An Ecofeminist Theology of Earth Healing*. New York: Harper Collins, 1992.
- Sardar, Ziauddin. *Islamic Futures: The Shape of Ideas to Come*. Malaysian edition (English). Kuala Lumpur: Pelanduk Publications, 1988.
- Sardar, Ziauddin, ed. *The Touch of Midas: Scientific Values and the Environment in Islam and the West*. Manchester: Manchester University Press, 1984.
- _____. *An Early Crescent: The Future of Knowledge and the Environment in Islam*. London: Mansell, 1989.
- Schaeffer, Francis. *Pollution and the Death of Man: The Christian View of Ecology*. Wheaton, IL: Tyndale House Publishers, 1970.
- Scott, Alan. *Ideology and the New Social Movements*. London: Unwin Hyman, 1990.
- Snyder, Gary. *Earth House Hold*. New York: New Directions Books, 1969.
- Sowers, Jeannie L. *Environmental Politics in Egypt: Activists, Experts and the State*. Routledge Series in Middle Eastern Politics. New York: Routledge, 2013; paperback 2014.
- Spring, David, and Eileen, eds., *Ecology and Religion in History*. New York: Harper and Row, 1974.
- Steward, Julian H. *Theory of Culture Change: The Methodology of Multilinear Evolution*. Urbana, IL: University of Illinois Press, 1955.
- Taylor, Bron. *Dark Green Religion. Nature Spirituality and the Planetary Future*. Berkeley, CA: University of California Press, 2009a.
- Taylor, Charles. *The Malaise of Modernity*. Canada: House of Anansi Press, 1991.
- Thompson, Paul B. *Culture of the Land: Agrarian Vision – Sustainability and Environmental Ethics*, 1st edition. Lexington, Kentucky: The University Press of Kentucky, 2010.
- Tillich, Paul. *Theology of Culture*, edited by Robert C. Kimball. New York: Oxford University Press, 1964.

- Tisdell, Clement A. *Natural Resources, Growth, and Development: Economics, Ecology and Resource-Scarcity*. Westport, CT: Praeger, 1990.
- Touraine, Alain. *La Voix et le Regard*. Paris: Seuil, 1978.
- Tuan, Yi-Fu. *Topophilia: A Study of Environmental Perceptions, Attitudes, and Values*. Englewood Cliffs, New Jersey: Prentice-Hall, 1974.
- _____. *Space and Place: The Perspective of Experience*. Minneapolis: University of Minnesota Press, 1977.
- _____. *Morality and Imagination: Paradoxes of Progress*. Madison, WI: University of Wisconsin Press, 1989.
- _____. *Religion: From Place to Placelessness*. Photographs and essays by Martha A. Strawn. Chicago, IL: Center for American Places at Columbia College. Distributed by the University of Chicago Press, 2010.
- Tucker, Mary Evelyn. *Worldly Wonder: Religions Enter Their Ecological Phase*. Chicago, IL: Open Court Publishing Company, 2003.
- Vadillo, Umar. *The End of Economics: An Islamic Critique of Economics*. Granada: Madinah Press, 1991.
- Verschuuren, Bas, Wild, Robert, McNeely, Jeffrey A., and Gonzalo Oviedo, eds. *Sacred Natural Sites: Conserving Nature and Culture*. London, UK, and Washington D.C., USA: Earthscan, 2010.
- Weber, Max. *Die protestantische Ethik und der 'Geist' des Kapitalismus*. Archiv für Sozialwissenschaft und Sozialpolitik XX – XXI, 1904–1905. English translation by Talcott Parsons. *The Protestant Ethic and The Spirit of Capitalism*. New York: Charles Scribner & Sons, 1958.
- Weston, Burns H., and David Bollier. *Green Governance: Ecological Survival, Human Rights, and the Law of the Commons*. Cambridge: Cambridge University Press, 2013.
- White, Lynn, Jr. *Machina Ex Deo: Essays in the Dynamism of Western Culture*. Cambridge, Mass.: MIT Press, 1968.
- Whitefield, Patrick. *Permaculture in a Nutshell*. Hampshire, UK: Permanent Publications, 2000 [1993].
- Wilkinson, Philip. *Eyewitness Companions: Religions*, edited by Marek Walisiewicz, Kati Dye, Jamie Dickson, Louise Abbott. London: Dorling Kindersley Ltd., 2008.
- Yaffe, Martin D., ed. *Judaism and Environmental Ethics: A Reader*. Lanham, MD: Lexington Books, 2001.
- Yahya, H.S.A. *The Importance of Wildlife Conservation from an Islamic Perspective*. Delhi: Authors Press, 2003.
- _____. *Biodiversity Conservation Ethics in Major Religions*. Bloomington, IN: AuthorHouse, 2010.

Chapters

- Abdel Haleem, Muhammad A. S. "Water in the Qur'an." In *Islam and the Environment*, edited by Harfiyah Abdel Haleem, 103–17. London-New York: Ta-Ha Publishers, 1998.
- Ammar, Nawal H. "An Islamic Response to the Manifest Ecological Crisis: Issues of Justice." In *Worldviews, Religion, and the Environment: A Global Anthology*, edited by Richard C. Foltz, 376–84. Australia; Belmont, CA: Thomson/Wadsworth Publishing, 2003.
- Baugh, Amanda. "Gender." In *Grounding Religion: A Field Guide to the Study of Religion and Ecology*, edited by Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O'Brien, 130–46. New York: Routledge, 2011.
- Bauman, Whitney, Bohannon, Richard, and Kevin J. O'Brien. "Ecology. What is it, who gets to decide, and why does it matter?" In *Grounding Religion: A Field Guide to the Study of Religion and Ecology*, edited by Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O'Brien, 49–63. New York: Routledge, 2011.
- Beaumont, Peter. "Water Institutions in the Middle East." In *Water Institutions: Policies, Performance and Prospects*, edited by Chennat Gopalakrishna, Cecilia Tortajada, and Asit K. Biswas, 131–53. Berlin-Heidelberg: Springer Verlag, 2005.
- Bedford-Strohm, Heinrich. "Public Theology of Ecology and Civil Society," in *Religion and Ecology in the Public Sphere*, edited by Celia Deane-Drummond and Heinrich Bedford-Strohm, 39–56. London: Continuum/ T & T Clark, 2011.
- Berkes, Fikret, and M. Taghi Farvar. "Introduction and Overview." In *Common Property Resources: Ecology and Community-based Sustainable Development*, edited by Fikret Berkes, 1–17. London, UK: Belhaven Press, 1989.
- Blumer, Herbert. "Collective Behavior." In *Principles of Sociology*, edited by Alfred M. Lee, 167–221. New York: Barnes & Noble, 1969.
- Cherfane, Carol Chouchani, and Karim Makdisi. "Envisioning an Arab Agenda for Trade and Environment." In *Envisioning a Sustainable Development Agenda for Trade and Environment*, edited by Adil Najam, Mark Halle, and Ricardo Meléndez-Ortiz, 49–76. New York: Palgrave Macmillan, 2007.
- Davis, Joseph E., "Narratives and Social Movements: The Power of Stories." In *Stories of Change: Narrative and Social Movements*, edited by Joseph E. Davis, 3–30. Albany, NY: SUNY Press, 2002. Accessed May 5, 2015. <http://www.sunypress.edu/pdf/60458.pdf>.
- Deane-Drummond, Celia, and Lisa Sideris. "Ecology: a dialogue." In *Grounding Religion: A Field Guide to the Study of Religion and*

- Ecology*, edited by Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O'Brien, 64–72. New York: Routledge, 2011.
- Dockrat, Hashim Ismail. "Islam, Muslim Society, and Environmental Concerns: A Development Model Based on Islam's Organic Society." In *Islam and Ecology: A Bestowed Trust*, edited by Richard C. Foltz, Frederick M. Denny, and Azizan Baharuddin, 341–375. Cambridge, Mass.: Harvard Divinity School, Center for the Study of World Religions, 2003; Distributed by Harvard University Press, 2003.
- Dyer-Witheford, Nick. "Antonio Negri on Information, Empire and Commonwealth." In *Critical Theory for Library and Information Science: Exploring the Social from Across the Disciplines*, edited by Gloria J. Leckie, Lisa M. Given, and John E. Buschman, 259–72. Santa Barbara, CA: ABC-CLIO, 2010.
- El Shamsy, Ahmed. "The Wisdom of God's Law: Two Theories." In *Islamic Law in Theory: Studies on Jurisprudence in Honor of Bernard Weiss*, edited by A. Kevin Reinhart and Robert Gleave, 19–38. Leiden-Boston: Brill, 2014.
- Emon, Anver M. "Religious Minorities and Islamic Law: Accommodation and the Limits of Tolerance." In *Islamic law and international human rights law: searching for common ground?*, edited by Mark S. Ellis, Anver M. Emon, and Benjamin Glahn, 323–43. Oxford: Oxford University Press, 2012.
- Faruqui, Naser I. "Islam and Water Management: Overview and Principles." In *Water management in Islam*, edited by N. I. Faruqui, A.K. Biswas, and M.J. Bino, 1–32. Tokyo: United Nations University Press, 2001.
- Foltz, Richard C. "Islamic Environmentalism in Theory and Practice." In *Worldviews, Religion, and the Environment: A Global Anthology*, edited by Richard C. Foltz, 358–65. Australia; Belmont, CA: Thomson/Wadsworth Publishing, 2003.
- Fredericks, Sarah E. "Comparative ethics for sustainability." In *Measuring and Evaluating Sustainability: Ethics in Sustainability Indexes*, 72–121. London-New York: Routledge, 2014.
- Ganz, Marshall. "Leading Change, Leadership, Organization, and Social Movements." In *Handbook of Leadership Theory and Practice: A Harvard Business School Centennial Colloquium*, edited by Nitin Nohria and Rakesh Khurana, 527–68. Boston, Mass.: Harvard Business Press, 2010.
- Gibbs, Christopher J.N., and Daniel W. Bromley. "Institutional Arrangements for Management of Rural Resources: Common-Property Regimes." In *Common Property Resources: Ecology and Community-based Sustainable Development*. London: Belhaven Press, 1989.

- Glassman, Jim. "Neoliberal primitive accumulation." In *Neoliberal Environments. False Promises and Unnatural Consequences*, edited by Nik Heynen, James McCarthy, Scott Prudham, and Paul Robbins, 94–7. New York: Routledge, 2007.
- Goeminne, Gert, and Erik Paredis. "The Concept of Ecological Debt: An Environmental Justice Approach to Sustainability, Calling for Radical Transitions in Industrialised Countries." In *Connected Accountabilities. Environmental Justice & Global Citizenship*, edited by Sivaram Vemuri, 37–61. Inter-Disciplinary Press, 2009.
- Gottlieb, Roger S. "Introduction: Religion and Ecology — What Is the Connection and Why Does It Matter?" In *The Oxford Handbook of Religion and Ecology*, 4–19. Online publication date: September 2009. Accessed June 6, 2015. DOI 10.1093/oxfordhb/9780195178722.003.0001.
- Gould, Rebecca, and Wallace, Mark I. "Religion: a dialogue." In *Grounding Religion: A Field Guide to the Study of Religion and Ecology*, edited by Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O'Brien, 27–40. New York: Routledge, 2011.
- Gray, Barbara. "Framing Environmental Disputes." In *Making Sense of Intractable Environmental Conflicts*, edited by R. J. Lewicki and M. Elliot, 11–34. Washington, D.C.: Island Press, 2003.
- Grima, A.P. Lino, and Fikret Berkes. "Natural Resources: Access, Rights-to-Use and Management." In *Common Property Resources: Ecology and Community-based Sustainable Development*, edited by Fikret Berkes, 33–54. London, UK: Belhaven Press, 1989.
- Grondin, Jean. "To What Extent is the New Ecological Consciousness a Religious Phenomenon?" *Journal of Aesthetics and Phenomenology* 1, no. 1 (2014): 111–8. Accessed June 2, 2015. <http://dx.doi.org/10.2752/20539339XX14005942183892>.
- Haddad, Fidaa F. "Rangeland resource governance – Jordan." In *The Governance of Rangelands: Collective Action for Sustainable Pastoralism*, edited by Pedro M. Herrera, Jonathan Davies, and Pablo Manzano Baena, 45–61. London: Earthscan-Routledge, 2014.
- Haeckel, Ernst H.P.A. "Zweites Capitel - I. Morphologie und Biologie." In *Generelle morphologie der organismen*, 8–10. Berlin: G. Reimer, 1866. Accessed July 7, 2015. <https://archive.org/details/generellemorpho101haec>.
- Han, Eulalia. "Empowering the People: Towards the Inclusion of a Global Civil Society." In *Governments' Responses to Climate Change: Selected Examples From Asia Pacific*, edited by Nur Azha Putra and Eulalia Han, 101–17. Singapore Private Limited: Springer Science & Business Media, 2013.

- Haq, S. Nomanul. "Islam." In *A Companion to Environmental Philosophy*, edited by Dale Jamieson, 111–29. Oxford, UK; Malden, Mass., USA : Blackwell, 2003.
- Hartman, Laura M. "Economics." In *Grounding Religion: A Field Guide to the Study of Religion and Ecology*, edited by Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O'Brien, 147–62. New York: Routledge, 2011.
- Hobson, Ismail. "Islam's Guiding Principles for a Solution to Environmental Problems." In *Islam and the Environment*, ed. Harfiya Abdel Haleem, 33–42. London-New York: Ta-Ha Publishers, 1998.
- Izzi Dien, Mawil Y. "Islamic Environmental Ethics, Law, and Society." In *Ethics of Environment and Development: Global Challenge and International Response*, edited by J. Ronald Engel and Joan Gibb Engel, 189–98. Tucson: University of Arizona Press, 1990.
- _____. "Islamic Ethics and the Environment." In *Islam and Ecology*, edited by Fazlun Khalid and Joanne O'Brien. New York: Cassell, 1992.
- Javed, Nayyar. "Sufi Path: Possibilities of Transcending Limited and Limiting Identity." In *Radical Human Ecology: Intercultural and Indigenous Approaches*, edited by Lewis Williams, Rose Roberts, and Alastair McIntosh, 161–78. Farnham, UK: Ashgate, 2012.
- Jensen, Karsten Klint. "Climate change and motivation: The obstacle from conflicting perspectives." In *The Politics of Sustainability: Philosophical Perspectives*, edited by Dieter Birnbacher and May Thorseth. Abingdon, Oxon; New York, NY : Routledge Studies in Sustainability, 2015.
- Jung, Shannon. "The Recovery of the Land: Agribusiness and Creation-Centered Stewardship." In *Religion and the Life of the Nation: American Recoveries*, edited by Rowland A. Sherrill, 109–27. Urbana: University of Illinois Press, 1990.
- Kaul, Inge, and Ronald U. Mendoza. "Advancing the Concept of Public Goods." In *Providing Global Public Goods: Managing Globalization*, edited by Inge Kaul, Pedro Conceicao, Katell Le Goulven, and Ronald U. Mendoza, 78–112. New York: Oxford University Press, 2003.
- Khalid, Fazlun. "Islam, Ecology and the World Order." In *Islam and the Environment*, edited by Harfiyah Abdel Haleem, 16–31. London-New York: Ta-Ha Publishers, 1998.
- Le Gai Eaton, Charles. "Islam and the Environment." In *Islam and the Environment*, edited by Harfiyah Abdel Haleem, 43–54. London-New York: Ta-Ha Publishers, 1998.

- Lindekilde, Lasse. "Discourse and Frame Analysis." In *Methodological Practices in Social Movement Research*, edited by Donatella Della Porta, 195–227. Oxford, UK: Oxford University Press, 2015.
- Llewellyn, Othman Abd-ar-Rahman. "The Basis for a Discipline of Islamic Environmental Law." In *Islam and Ecology: A Bestowed Trust*, edited by Richard C. Foltz, Frederick M. Denny, and Azizan Baharuddin, 185–247. Cambridge, Mass.: Harvard Divinity School, Center for the Study of World Religions, 2003; Distributed by Harvard University Press, 2003.
- Maarouf, Mohammed. "The Buffi Representation of the World of Jinn." In *Jinn Eviction as a Discourse of Power: A Multidisciplinary Approach to Moroccan Magical Beliefs and Practices*, 83–142. Leiden, NL: Brill, 2007.
- Makdisi, Karim. "Towards a Human Rights Approach to Water in Lebanon: Implementation beyond 'Reform'." In *Water as a Human Right for the Middle East and North Africa*, edited by Asit K. Biswas, Eglal Rached, and Cecilia Tortajada, 161–82. Ottawa, Canada: Routledge, IDRC, 2008.
- Manzoor, S. Parvez. "Environment and Values: The Islamic Perspective." In *The Touch of Midas: Science, Values and Environment in Islam and the West*, edited by Ziauddin Sardar, 150–69. Manchester: Manchester University Press, 1984.
- McDaniel, Jay B. "Ecotheology and World Religions." In *Ecospirit: Religions and Philosophies for the Earth*, edited by Laurel Kearns and Catherine Keller. New York: Fordham University Press, 2007.
- Mees, Roland. "Sustainable action and moral corruption." In *The Politics of Sustainability: Philosophical Perspectives*. Abingdon, Oxon; New York, NY: Routledge Studies in Sustainability, 2015.
- Nasr, Seyyed Hossein. "The Ecological Problem in Light of Sufism: The Conquest of Nature and the Teachings of Eastern Science." In *Sufi Essays*, edited by Seyyed Hossein Nasr, 152–63. Albany, N.Y.: State University of New York Press, 1991.
- _____. "Islam and the Environmental Crisis." In *Spirit and Nature: Why the Environment is a Religious Issue*, edited by Steven C. Rockefeller and John C. Elder, 83–108. Boston: Beacon Press, 1992.
- Özdemir, İbrahim. "Towards an Understanding of Environmental Ethics from a Qur'anic Perspective." In *Islam and Ecology: A Bestowed Trust*, edited by Richard C. Foltz, Frederick M. Denny, and Azizan Baharuddin, 3–37. Cambridge, Mass.: Center for the Study of World Religions, Harvard Divinity School; Distributed by Harvard University Press, 2003.

- Partridge, Ernest. "Future generations." In *A Companion to Environmental Ethics*, edited by Dale Jamieson, 377–89. Oxford, UK ; Malden, Mass., USA: Blackwell, 2003.
- Parvaiz, Muhammad Aslam. "Man, Nature and Islam." In *The Encyclopedia of Religion and Nature*, edited by Bron Taylor and Jeffrey Kaplan. London and New York: Thoemmes Continuum, 2004.
- Pfeifer, Karen. "Is There an Islamic Economics?" In *Political Islam: Essays from Middle East Report*, edited by Joel Beinin and Joe Stork, 144–53. London-NY: I.B. Tauris & co Ltd., 1997.
- Sait, Siraj, and Hilary Lim. "Islamic Land Tenures and Reform." In *Land, Law and Islam: Property and Human Rights in the Muslim World*, vol. 1, 54–79. London-NY: Zed Books, 2006.
- Sandmo, Agnar. "Pigouvian taxes." In *The New Palgrave Dictionary of Economics*, 2nd edn., edited by Steven N. Durlauf and Lawrence E. Blume. Basingstoke, UK: Palgrave Macmillan, 2008. Accessed November 2, 2015. http://www.dictionaryofeconomics.com/article?id=pde2008_P000351. DOI: 10.1057/9780230226203.1289.
- Saniotis, Arthur. "Nature as an expression of Tawhid (Divine Unity)." In *Biodiversity and Ecology as Interdisciplinary Challenge*, edited by Denis Edwards and Mark Worthing, 101–8. Australian Theological Forum Press, 2004.
- Sardar, Ziauddin. "Toward an Islamic Theory of the Environment." In *Islamic Futures: The Shape of Ideas to Come*, edited by Ziauddin Sardar, 224–37. London: Mansell, 1985.
- Scheffler, Samuel. "The Normativity of Tradition." In *Equality and Tradition: Questions of Value in Moral and Political Theory*, 287–305. New York: Oxford University Press, 2010.
- Schumacher, Ernest Friedrich. "Buddhist Economics." In *Asia: A Handbook*, edited by Guy Wint, 695–701. New York: Praeger: 1966.
- Scott, Peter Manley. "Right Out of Time? Politics and Nature in a Postnatural Condition." In *Religion and Ecology in the Public Sphere*, edited by Celia Deane-Drummond and Heinrich Bedford-Strohm, 57–74. London: Continuum/T & T Clark, 2011.
- Shogar, Ibrahim. "Reconstruction of the Worldview as Strategy of Environmental Survival and Sustainability." In *Survival and Sustainability: Environmental concerns in the 21st Century*, edited by Hüseyin Gökçekus, Umut Türker, and James W. LaMoreaux, Heidelberg, 751–8. Dordrecht, London, New York: Springer Science & Business Media, 2011.
- Spangenberg, Joachim H. "Ideology and practice of the 'Green Economy': World views shaping science and politics." In *The*

- Politics of Sustainability: Philosophical Perspectives*, 127–50. Abingdon, Oxon; New York, NY: Routledge Studies in Sustainability, 2015.
- Stewart, Keith. “Avoiding the Tragedy of the Commons: Greening Governance through the Market or the Public Domain?” In *The Market or the Public Domain: Global Governance and the Asymmetry of Power*, edited by Daniel Drache. London: Routledge, 2001. Accessed May 8, 2016. http://www.yorku.ca/drache/talks/pdf/apd_stewartfin.pdf.
- Taylor, Bron. “Deep Ecology and Its Social Philosophy: A Critique.” In *Beneath the Surface: Critical Essays in the Philosophy of Deep Ecology*, edited by Eric Katz, Andrew Light, and David Rothenberg, 269–99. Cambridge: MIT Press, 2000. Accessed March 6, 2016. http://www.brontaylor.com/environmental_articles/pdf/Taylor--DeepEcologyasSocialPhilosophy.pdf.
- _____. “From the Ground Up: Dark Green Religion and the Environmental Future.” In *Ecology and the Environment: Perspectives from the Humanities*, edited by Donald K. Swearer, 89–107. Cambridge, MA: Harvard University Press, 2008.
- Thorseth, May. “Limitations to democratic governance of natural resources.” In *The Politics of Sustainability: Philosophical Perspectives*, edited by Dieter Birnbacher and May Thorseth, 36–52. Abingdon, Oxon; New York, NY: Routledge Studies in Sustainability, 2015.
- Timm, Roger E. “The Ecological Fallout of Islamic Creation Theology.” In *Worldviews and Ecology: Religion, Philosophy, and the Environment*, edited by Mary Evelyn Tucker and John Grim, 83–95. Maryknoll: Orbis Books, 1994.
- Tucker, Mary Evelyn, and John Grim. “Intellectual and Organizational Foundations of Religion and Ecology.” In *Grounding Religion: A Field Guide to the Study of Religion and Ecology*, edited by Whitney A. Bauman, Richard R. Bohannon II, and Kevin J. O’Brien, 81–95. New York: Routledge, 2011.
- Vincent, Peter. “Environmental Protection, Regulation and Policy.” In *Saudi Arabia: An Environmental Overview*, 247–98. London-New York: Taylor & Francis, 2008.
- Walliman-Helmer, Ivo. “The liberal tragedy of the commons: The deficiency of democracy in a changing climate.” In *The Politics of Sustainability: Philosophical Perspectives*, edited by Dieter Birnbacher and May Thorseth, 20–35. Abingdon, Oxon; New York, NY: Routledge Studies in Sustainability, 2015.
- Watling, Tony. “The Field of Religion and Ecology: Addressing the Environmental Crisis and Challenging Faiths.” In *Religion: Beyond*

- a Concept*, edited by Hent de Vries, 473–90. New York: Fordham University Press, 2008.
- _____. “Islamic Visions.” In *Ecological Imaginations in the World Religions: An Ethnographic Analysis*, 158–74. London-New York: Continuum, 2009.
- Wickström, Laura. “Islam and Water: Islamic guiding principles on water management.” In *Managing Blue Gold: New Perspectives on Water Security in the Levantine Middle East*, edited by Mari Luomi, 98–108. Helsinki: The Finnish Institute of International Affairs Ulkopoliittinen instituutti, FIIA Report 25, 2010.

Theses or Dissertations

- Bradbury, Sarah Jayne. "The Role of Grassroots Sustainability Associations in Framing Sustainability Issues to Mobilise Communities for Social Change." PhD diss., University of Leeds, June 2015.
- Di Paola, Marcello. "Out of the Wild: A Garden-based Theory of Biodiversity Conservation." PhD diss., LUISS University Guido Carli, 2010.
- Gürlesinan, Ömer Faruk. "An Islamic Understanding of the Environment. Theory and Practice. A Survey on Turkish University Students." MA Thesis, Leiden University, February 2009. Accessed March 7, 2016. <https://leidenuniv.academia.edu/%C3%96merFarukG%C3%BCrleBCrl>.
- Härmälä, Inga Viola. "Transformative Islamic Ecology – Beliefs and Practices of Muslims for Sustainable Agriculture and Permaculture." MA Thesis, Lund University, 2014.
- Horenstein, Aaron. "The Relationship between Religious Attitudes and Concern for Environment." Master's Thesis, Columbia University, 2012. Accessed March 12, 2016. <http://static1.1.sqspcdn.com/static/f/1528810/23322800/1376593913765/Horenstein+Aaron.pdf?token=ugIQX2epD7NtafmKk2AMAMQjkRA%3D>.
- Mohamed, Najma. "Revitalising an Eco-Justice Ethic of Islam by way of Environmental Education: Implications for Islamic Education." Ph.D. Thesis, Stellenbosch University, 2012.
- Owen, Anna C. "Industrial and Nutritional Hemp in Manitoba. A Case Study Exploring Stakeholder Strategies and Legitimacy." MA thesis, Humboldt State University, 2012. Accessed May 4, 2016. http://humboldt-dspace.calstate.edu/bitstream/handle/2148/1036/AOwen_Final2.pdf?sequence=4.
- Schwencke, Anne Marieke. "Seyyed Hossein Nasr. Traditionalism, Islamic Esotericism and Environmental Ethics." BA thesis, Leiden University, The Netherlands, June 2009.
- Swoboda, Aaron Jason. "Tongues and Trees: Towards a Green Pentecostal Pneumatology." PhD diss., The University of Birmingham, 2011. Accessed March 4, 2015. <http://etheses.bham.ac.uk/3003/1/Swoboda11PhD.pdf>.
- Villumsen, Sandra. "Habermas in the Garden: Broadening the Scope of Social Movements for Sustainability." Master's Thesis, Lund University International Master's Programme in Environmental Studies and Sustainability Science, 2012.

Yazid, Yazlina M. "Faith-Based Environmentalism: A Case Study of Islamic-Based Environmental Organisations in the United Kingdom." MA thesis, Institute of Social Studies - ISS, Erasmus University, January 2008. Accessed March 4, 2015. <http://hdl.handle.net/2105/7121>.

Encyclopedia entries

- Brennan, Andrew, and Yeuk-Sze Lo. "Environmental Ethics." In *The Stanford Encyclopedia of Philosophy* (Fall 2016 Edition), edited by Edward N. Zalta. Accessed July 26, 2015. <http://plato.stanford.edu/archives/fall2016/entries/ethics-environmental/>.
- Cochrane, Alasdair. "Environmental Ethics." In *Internet Encyclopedia of Philosophy* (IEP), edited by James Fieser and Bradley Dowden. Accessed May, 8, 2016. <http://www.iep.utm.edu/envi-eth/>.
- Denny, Frederick M. "Islam." In *Berkshire Encyclopedia of Sustainability: The Spirit of Sustainability (Vol. 1)*, edited by Willis Jenkins. Great Barrington, MA: Berkshire Publishing Group, 2010.
- Foltz, Richard C. "Islam." In *The Encyclopedia of Religion and Nature*, edited by Bron Taylor and Jeffrey Kaplan. London and New York: Thoemmes Continuum, 2005b.
- Habel, Norman. "Earth Bible." In *The Encyclopedia of Religion and Nature*, edited by Bron Taylor and Jeffrey Kaplan, 515–6. London and New York: Thoemmes Continuum, 2005.
- Healey, Richard. "Holism and Nonseparability in Physics." In *Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta. First published: July 22, 1999; substantive revision: January 5, 2016. Accessed May 8, 2016. <http://plato.stanford.edu/entries/physics-holism/>.
- Jenkins, Willis. "Anthropocentrism." In *Berkshire Encyclopedia of Sustainability: The Spirit of Sustainability (Vol. 1)*, edited by Willis Jenkins, 22–3. Great Barrington, MA: Berkshire Publishing Group, 2010.
- Johnston, Lucas F., and Todd LeVasseur. "Indigenous and Traditional Resource Management." In *Berkshire Encyclopedia of Sustainability: Natural Resources and Sustainability (Vol. 4)*, edited by Daniel Vasey, Sarah E. Fredericks, Shen Lei, Shirley Thompson, 232–9. Great Barrington, MA: Berkshire Publishing Group, 2012.
- Khalid, Fazlun. "Islam and the Environment." In *Encyclopedia of Global Environmental Change*, eds. Ted Munn and Peter Timmerman, 332–39. Chichester, UK: John Wiley and Sons Ltd., 2002. Accessed February 11, 2014. <http://www.ifees.org/islamenviroment.pdf>.

- Northcott, Michael S. "Environmentalism." In *The Encyclopedia of Politics and Religion: 2-volume set*, edited by Robert Wuthnow. London, UK: Routledge, 1998.
- O'Brien, Kevin J. "Ecology." In *Berkshire Encyclopedia of Sustainability: The Spirit of Sustainability (Vol. 1)*, ed. Willis Jenkins, 125–8. Great Barrington, MA: Berkshire Publishing Group, 2010.
- Rockefeller, Steven. "Earth Charter." In *Berkshire Encyclopedia of Sustainability: The Spirit of Sustainability (Vol. 1)*, edited by Willis Jenkins, 115–18. Great Barrington, MA: Berkshire Publishing Group, 2010.
- Saeed, Abdullah. "Economics." In *Encyclopedia of the Qur'an*, vol. 2, edited by Jane Dammen McAuliffe. Leiden-Boston: Brill, 2002.
- Scheid, Daniel P. "Common Good." In *Berkshire Encyclopedia of Sustainability: The Spirit of Sustainability (Vol. 1)*, edited by Willis Jenkins, 71–2. Great Barrington, MA: Berkshire Publishing Group, 2010.
- Schwarb, Gregor. "Kalām." In *Encyclopedia of Jews in the Islamic World*, edited by Norman A. Stillman (Executive Editor). First published online: 2010. Accessed October 21, 2015. http://referenceworks.brillonline.com/entries/encyclopedia-of-jews-in-the-islamic-world/kalam-COM_0015890.
- Taylor, Bron, and Jeffrey Kaplan, eds. *The Encyclopaedia of Religion and Nature*, Vol. 1 and 2. London-NY, England: Thoemmes Continuum, 2005.
- Tucker, Mary Evelyn. "World Religions and Ecology." In *Berkshire Encyclopedia of Sustainability: The Spirit of Sustainability (Vol. 1)*, edited by Willis Jenkins, Great Barrington, MA: Berkshire Publishing Group, 2010.

Articles

- Abedi-Sarvestani, Ahmad, and Mansoor Shahvali. "Environmental Ethics: Toward an Islamic Perspective." *American-Eurasian Journal of Agricultural & Environmental Sciences* 3, no. 4 (2008): 609–17. Accessed May 19, 2016. [http://www.idosi.org/aejaes/jaes3\(4\)/15.pdf](http://www.idosi.org/aejaes/jaes3(4)/15.pdf).
- Abu Bakar, Ibrahim. "Islamic Theological Teachings on Ecology." *International Journal of Business and Social Science* 3, no. 13 (July 2012): 222–6.
- Adger, W. Neil. "Social and ecological resilience: are they related?" *Progress in Human Geography* 24 (2000): 347–64.
- Afrasiabi, Kaveh L. "Toward an Islamic Ecotheology." *Hamdard Islamicus* 18, no. 1 (1995): 33–50. Reprinted in *Worldviews, Religion, and the Environment: A Global Anthology*, edited by

- Richard C. Foltz, 366–75. Australia; Belmont, CA: Thomson/Wadsworth Publishing, 2003.
- Agwan, A.R. “Toward an Ecological Consciousness.” *The American Journal of Islamic Social Sciences* 10, no. 2 (1993): 238–48.
- Akhtar, Muhammad Ramzan. “Towards an Islamic Approach for Environmental Balance.” *Islamic Economic Studies* 3, no. 2 (1996): 57–76. Accessed May 3, 2015. <http://www.irti.org/English/Research/Documents/IES/137.pdf>.
- Al-Damkhi, Ali Mohamed. “Environmental Ethics in Islam: Principles, Violations, and Future Perspectives.” *International Journal of Environmental Studies* 65, no. 1 (February 2008): 11–31. DOI: 10.1080/00207230701859724. Accessed June 7, 2016. <http://dx.doi.org/10.1080/00207230701859724>.
- Alvi, Farhat Naseem, and Afshan Noureen. “Understanding Ecology Issues and Finding their Islamic Solution.” *Al-Azwa* 28, Issue 40 (December 2013): 45–63. Accessed June 7, 2015. http://pu.edu.pk/images/journal/alqalam/PDF/5-%20afshan%20noureen_v28_issue40-2013.pdf.
- Atran, Scott, Medin, Douglas, Ross, Norbert, Lynch, Elizabeth, Vapnarsky, Valentina, Ucan Ek’, Edilberto, Coley, John, Timura, Christopher, and Michael Baran. “Folkecology, Cultural Epidemiology, and the Spirit of the Commons: A Garden Experiment in the Maya Lowlands, 1991–2001.” *Current Anthropology* 43, no. 3 (June 2002): 421–50. Accessed June 22, 2014. <http://www.journals.uchicago.edu/doi/10.1086/339528>.
- Bakker, Karen. “Neoliberalizing Nature? Market Environmentalism in Water Supply in England and Wales.” *Annals of the Association of American Geographers* 95, Issue 3 (August 2005): 542–65. Accessed June 20, 2015. DOI: 10.1111/j.1467-8306.2005.00474.x.
- _____. “Neoliberal nature, ecological fixes, and the pitfalls of comparative research.” *Environment and Planning A* 41 (2009): 1781–7.
- Baslar, K. “The stewardship ethic.” *The Fountain Magazine*, Issue 2, April-June 1993. Accessed October 13, 2016. <http://www.fountainmagazine.com/Issue/detail/The-stewardship-ethic>.
- Beck, Ulrich. “Climate for Change, or how to create a green modernity?” *Theory, Culture and Society* 27, no. 2–3 (2010):
- Behrens, Arno, and Bert Colijn. “The Socio-Economic Transition towards Sustainability and its Impacts on Jobs in Europe.” *Intereconomics* 47, no. 3 (2012): 146–51. Accessed July 7, 2015. <http://archive.intereconomics.eu/year/2012/3/green-growth/>.
- Benford, Robert D., and David A. Snow. “Framing Processes and Social Movements: An Overview and Assessment.” *Annual Review*

- of Sociology* 26 (2000): 611–39. Accessed May 9, 2015. DOI: 10.1146/annurev.soc.26.1.611.
- Berry, Thomas. “The New Story: Comments on the Origin, Identification, and Transmission of Values.” *Teilhard Studies* no. 1. Chambersburg, PA: Anima Press, Winter 1978. Accessed June 7, 2015. http://www.cambridgeunitarian.org/docs/The_New_Story.pdf.
- Biel, Anders, and Andreas Nilsson. “Religious Values and Environmental Concern: Harmony and Detachment.” *Social Science Quarterly* 86, Issue 1 (March 2005): 178–91. Accessed May 5, 2015. DOI: 10.1111/j.0038-4941.2005.00297.x.
- Blumer, Herbert. “What is wrong with social theory?” *American Sociological Review* 18 (1954): 3–10.
- Bori, Caterina, and Livnat Holtzman, eds. “A Scholar in the Shadow: Essays in the Legal and Theological Thought of Ibn Qayyim al-Jawziyya.” *Oriente Moderno*, Nuova Serie, Anno XC, no. 1. Rome: Istituto per l’Oriente C.A. Nallino, 2010. Accessed March 18, 2015. http://arabic.biu.ac.il/files/arabic/shared/staff/u16/introduction_-_finalfrontespizio.pdf.
- Bowen, Glenn A. “Grounded theory and sensitizing concepts.” *International Journal of Qualitative Methods* 5, no. 3 (2006): 12–23.
- Buchanan, J.M., and W.C. Stubblebine. “Externality.” *Economica* 29 (November 1962): 371–84.
- Buechler, Steven M. “New Social Movement Theories.” *Sociological Quarterly* 36, no. 3 (Summer 1995): 441–64. Accessed May 7, 2015. <http://www.jstor.org/stable/4120774>.
- Bukhari, M. Saleem. “Squatting and the Use of Islamic Law.” *Habitat International* 6 (1982): 555–63.
- Callicott, J. Baird, and Mumford, Karen. “Ecological Sustainability as a Conservation Concept.” *Ecological Sustainability* 11, Issue 1 (February 1997): 32–40.
- Castree, Noel. “Neoliberalising Nature: The Logics of Deregulation and Reregulation.” *Environment and Planning A* 40, no. 1 (2008): 131–52. Accessed June 7, 2015. DOI: 10.1068/a3999.
- Chan, Nathan W., and Matthew J. Kotchen. “A generalized impure public good and linear characteristics model of green consumption.” *Resource and Energy Economics* 37 (August 2014): 1–16.
- Chapra, Umar. “Is it necessary to have Islamic economics?” *Journal of Socio-Economics* 29 (2000): 21–37. Accessed March 7, 2015. http://ues.ac.ir/files/takmili/islamic_econ./islamic_is_it.pdf.

- Chittick, William. “‘God Surrounds All Things’: An Islamic Perspective on the Environment.” *The World and I* 1, no. 6 (June 1986): 671–8.
- Choudhury, Masudul Alam. “Islamic Economics as a Social Science.” *International Journal of Social Economics* 17, no. 6 (1990): 35–59.
- Civiltà Cattolica (La). “Protecting the Whole of Creation. A service that the Bishop of Rome is called to carry out.” *La Civiltà Cattolica* II (2015): 537–51. Accessed February 7, 2016. http://www.laciviltacattolica.it/articoli_download/extra/Editorial-ENG.pdf.
- Cobb, John B. “Christian Existence in a World of Limits.” *Environmental Ethics* 1, Issue 2 (Summer 1979): 149–58. DOI: 10.5840/enviroethics19791219.
- Cornforth, Alana. “Behaviour Change: Insights for Environmental Policy Making from Social Psychology and Behavioural Economics.” *Policy Quarterly* 5, no. 4 (November 2009): 21–8.
- Costanza, Robert. “What is Ecological Economics?” *Ecological Economics* 1 (1989): 1–7. Accessed May 9, 2015. <http://www.uvm.edu/~jfarley/EEseminar/readings/What%20is%20ecological%20economics.pdf>.
- Cote, Muriel, and Nightingale, Andrea J. “Resilience thinking meets social theory: Situating social change in socio-ecological systems (SES) research.” *Progress in Human Geography* 36, no. 4 (2012): 475–489. Accessed May 5, 2015. <http://phg.sagepub.com/content/36/4/475.full.pdf>.
- Dasgupta, Partha. “Measuring Sustainable Development: Theory and Application.” *Asian Development Review*, 24, no. 1 (2007): 1–10.
- Davies, George Randal. “Appraising Weak and Strong Sustainability: Searching for a Middle Ground.” *Consilience: The Journal of Sustainable Development* 10, Issue 1 (2013): 111–24. Accessed May 18, 2016. <http://www.consiliencejournal.org/index.php/consilience/article/view/288/157>.
- Diani, Mario. “The Concept of Social Movement.” *The Sociological Review* 40, Issue 1 (February 1992): 1–25. Accessed May 7, 2015. DOI: 10.1111/j.1467-954X.1992.tb02943.x.
- Djupe, Paul A., and Patrick K. Hunt. “Beyond the Lynn White Thesis: Congregational Effects on Environmental Concern.” *Journal for the Scientific Study of Religion* 48, no. 4 (2009): 670–86.
- Duque, R. Lyle. Review: Catherine Kohler Riessman (2008). *Narrative Methods for the Human Sciences*. CA, USA: SAGE Publications, 2008. *Forum: Qualitative Social Research* (FQS) 11, no. 1, Art. 19 (January 2010). Accessed October 2, 2016. <http://www.qualitative-research.net/index.php/fqs/article/view/1418/2906#g4>.

- Endres, Alfred. "Game Theory and Global Environmental Policy." *Poiesis & Praxis* 3, Issue 1 (October 2004): 123–39. Accessed March 7, 2015. DOI: D10.1007/s10202-003-0059-9.
- Foltz, Richard C. "Is There an Islamic Environmentalism?" *Environmental Ethics* 22, no. 4 (2000): 63–72.
- Fotopoulos, Takis. "The Ecological Crisis as Part of the Present Multi-dimensional Crisis and Inclusive Democracy." *The International Journal of Inclusive Democracy* 3, no. 3 (July 2007). Accessed February 6, 2015. http://www.inclusivedemocracy.org/journal/vol3/vol3_no3_takis_torino.htm.
- Frantzeskaki, Niki, and Hans De Haan. "Transitions: Two Steps from Theory to Policy." *Futures: The Journal of Policy, Planning and Futures Studies* 41, no. 9 (November 2009): 593–606. Accessed February 7, 2016. DOI: 10.1016/j.futures.2009.04.009.
- Gada, Mohd Yaseen. "Environmental Ethics in Islam: Principles and Perspectives." *World Journal of Islamic History and Civilization* 4, no. 4 (2014): 130–38. DOI: 10.5829/idosi.wjihc.2014.4.4.443. Accessed May 7, 2016. [http://idosi.org/wjihc/wjihc4\(4\)14/3.pdf](http://idosi.org/wjihc/wjihc4(4)14/3.pdf).
- Gardiner, Stephen M. "A Perfect Moral Storm: Climate Change, Intergenerational Ethics and the Problem of Moral Corruption." *Environmental Values* 15 (2006): 397–413.
- Gari, Lutfullah. "A History of the Hima Conservation System." *Environment and History* 12, no. 2 (May 2006): 213–28. Accessed June 7, 2015. http://www.environmentandsociety.org/sites/default/files/key_doc_d/gari-12-2.pdf.
- Ghafory-Ashtiany, Mohsen. "The Islamic View of Earthquakes, Human Vitality and Disaster." *Disaster Prevention and Management: An International Journal* 18, Issue 3 (2009): 218–32. Accessed May 8, 2015. DOI: <http://dx.doi.org/10.1108/09653560910965600>.
- Giner, Salvador, and David Tábara. "Cosmic Piety and Ecological Rationality." *International Sociology* 14, no. 1 (March 1999): 59–82.
- Glassman, Jim. "Primitive Accumulation, Accumulation by Dispossession, Accumulation by 'Extraneous' Means." *Progress in Human Geography* 30, no. 5 (October 2006): 608–25. Accessed July 1, 2015. DOI: 10.1177/0309132506070172.
- Gómez-Baggethun, Erik, and Manuel Ruiz-Pérez. "Economic valuation and the commodification of ecosystem services." *Progress in Physical Geography* 35, no. 5 (October 2011): 617–32.
- Haq, S. Nomanul. "Islam and Ecology: Toward Retrieval and Reconstruction." *Daedalus* 130, no. 4 (2001): 141–78.

- Harris, Marvin. "The Cultural Ecology of India's Sacred Cattle." *Current Anthropology* 7, no. 1 (February 1966): 51–66.
- Iqbal, Munawar. "Islam and the Environment: Theory and Practice." *Journal of Beliefs & Values* 18, no. 1 (1997): 47–58.
- Islam, Muhammad Muinul. "Towards a Green Earth: An Islamic Perspective." *Asian Affairs* 26, no. 4 (October-December 2004): 44–89.
- Izzi Dien, Mawil Y. "Environmental Protection and Islam." *Journal of the Faculty of Arts, King Abdul Aziz University* 5 (1985): 35–43.
- Jenkins, Willis, and Christopher Key Chapple. "Religion and Environment." *Annual Review of Environment and Resources* 36 (2011): 441–63. DOI: 10.1146/annurev-environ-042610-103728.
- Johnston, Lucas F. "Sustainability as a Global Faith? The Religious Dimensions of Sustainability and Personal Risk." *Journal of the American Academy of Religion* 82, no. 1 (March 1, 2014): 47–69. Accessed March 3, 2015. DOI: 10.1093/jaarel/lft056.
- Karakas, Fahri. "Exploring Value Compasses of Leaders in Organizations: Introducing Nine Spiritual Anchors." *Journal of Business Ethics*, 93, Supplement 1 (June 2010): 73–92. Accessed December 7, 2015. DOI: 10.1007/s10551-010-0627-6.
- Kaza, Stephanie. "To Save All Beings: Buddhist Environmental Activism." In *Engaged Buddhism in the West*, edited by Christopher S. Queen, 159–83. Boston: Wisdom Publications, 2000.
- Kollock, Peter. "Social Dilemmas: Anatomy of Cooperation." *Annual Review of Sociology* 24 (1998): 183–214.
- Lammers, Bernard. "Preservation of the Adirondacks." *Boston College Environmental Affairs Law Review* 1, Issue 3 (1971): 625–30. Accessed May 5, 2015. <http://lawdigitalcommons.bc.edu/ealr/vol1/iss3/9>.
- Laxman, Lekha, Ansari, Abdul Haseeb, and Zawawi, Majdah. "The Islamic Approach to Conserving Biodiversity For Global Sustainability: An Exploration." *Advances in Environmental Biology* 8, no. 3 (2014): 748–64. Accessed March 8, 2015. <http://www.aensiweb.com/old/aeb/2014/748-764.pdf>.
- Levi, Ricki, and Daniel Mishori. "Water, the Sacred and the Commons of Rajasthan: A Review of Anupam Mishra's Philosophy of Water." *Transcience* 6, Issue 2 (2015): 1–25, accessed February 8, 2016, http://www2.hu-berlin.de/transcience/Vol6_No2_1_25.pdf.
- Lovejoy, Arthur O. "The Supposed Primitivism of Rousseau's 'Discourse on Inequality'." *Modern Philology* 21, no. 2 (November 1923): 165–86. Accessed May 7, 2015, <http://www.jstor.org/stable/433742>.

- Macy, Joanna Rogers. "Dependent Co-arising: The Distinctiveness of Buddhist Ethics." *Journal of Religious Ethics* 7, no. 1 (Spring 1979): 38–52. Accessed June 7, 2016. <http://www.jstor.org/stable/40018242>.
- Melucci, Alberto. "The Symbolic Challenge of Contemporary Movements," *Social Research* 52, no. 4 (1985): 789–816. Accessed February 7, 2014. <http://www.jstor.org/stable/40970398>.
- Mika, Marie. "Framing the Issue: Religion, Secular Ethics and the Case of Animal Rights Mobilization." *Social Forces*, no. 2 (December 2006): 915–41. Accessed March 7, 2015. <http://www.jstor.org/stable/4494944>.
- Mikusiński, Grzegorz, Possingham, Hugh P., and Malgorzata Blicharska. "Biodiversity priority areas and religions — a global analysis of spatial overlap." *Oryx* 48, Issue 1 (January 2014): 17–22.
- Mohamed, Najma. "Islamic Education, Eco-Ethics and Community." *Studies in Philosophy and Education* 33, Issue 3 (May 2014): 315–28.
- Murad, Munjed M. "Islamic Environmental Stewardship: Nature and Science in the Light of Islamic Philosophy." *Union Seminary Quarterly Review* 63, nos. 1–2 (2011): 145–63. Accessed May 9, 2015. <http://usqr.utsnyc.edu/wp-content/uploads/2011/08/MuradUSQRv63-1-2.pdf>.
- Nasr, Seyyed Hossein. "Islam and the Environmental Crisis." *Journal of Islamic Science* 6(2) (1990), 217–34.
- Næss, Arne. "The Shallow and the Deep, Long-Range Ecology Movement." *Inquiry* 16 (1973), 95–100.
- Neves-Graça, Katja. "Revisiting the tragedy of the commons: Ecological dilemmas of whale watching in the Azores." *Human Organization* 63, no. 3 (Fall 2004): 289–300.
- Offe, Claus. "New Social Movements: Challenging the Boundaries of Institutional Politics." *Social Research: An International Quarterly* 52, no. 4 (1985): 817–68.
- Panno, Angelo, Carrus, Giuseppe, Maricchiolo, Fridanna, and Lucia Mannetti. "Cognitive reappraisal and pro-environmental behavior: The role of global climate change perception." *European Journal of Social Psychology* 45, Issue 7 (December 2015): 858–67. Accessed January 8, 2015. DOI: 10.1002/ejsp.2162.
- Parenti, Michael. "Why the Corporate Rich Oppose Environmentalism." *State of Nature* 2 (Winter 2006). Accessed July 6, 2015. <http://www.stateofnature.org/corporateRich.html>.
- Petersen, Rodney L. "Religion and the Quest for Equity in Consumption, Population, and Sustainability." *Bulletin of Science,*

- Technology & Society* 19, no. 3 (June 1999): 199–205. Accessed February 3, 2016. DOI: 10.1177/027046769901900303.
- Pichardo, Nelson A. “New Social Movements: A Critical Review.” *Annual Review of Sociology* 23 (August 1997): 411–30. Accessed May 8, 2016. <http://www.jstor.org/stable/2952558>.
- Pignatti, Sandro. “A discussion on the foundations of environmental ethics.” *Rendiconti Lincei - Scienze Fisiche e Naturali* 24, Issue 2 (2013): 89–94. Accessed May 5, 2016. DOI: 10.1007/s12210-013-0226-4.
- Polletta, Francesca. “Contending Stories: Narrative in Social Movements.” *Qualitative Sociology* 21, Issue 4 (December 1998): 419–46. Accessed June 7, 2015. DOI: 10.1023/A:1023332410633.
- Reichel-Dolmatoff, Gerardo. “Cosmology as Ecological Analysis: A View from the Rainforest.” *Man* 11, Issue 3 (September 1976): 307–18. Accessed September 5, 2016. <http://www.jstor.org/stable/2800273>.
- Reuter, Thomas A. “The Green Revolution in the World’s Religions: Indonesian Examples in International Comparison.” *Religions* 6 (2015): 1217–31. Accessed May 5, 2016. DOI: 10.3390/rel6041217.
- Rotmans, Jan, Kemp, René, and Marjolein van Asselt. “More Evolution than Revolution: Transition Management in Public Policy.” *Foresight* 3, no. 1 (February 2001): 15–31.
- Salasal, S. Siti Mariam Malinumbay. “The Concept of Land Ownership: Islamic Perspective.” *Buletin Geoinformasi* 2, no. 2 (December 1998): 285–304.
- Salim, Ssuna, Abdullah, Syahrul Faizaz Binti, and Kamarudin bin Ahmad. “Wilayat Al-Hisba: A Means to Achieve Justice and Maintain High Ethical Standards in Societies.” *Mediterranean Journal of Social Sciences* 6, no. 4, S2 (July 2015): 201–6. Accessed July 8, 2016. DOI: 10.5901/mjss.2015.v6n4s2p201.
- Samuelson, Paul A. “The Pure Theory of Public Expenditure.” *Review of Economics and Statistics* 36, no. 4 (November 1954): 387–9.
- Saniotis, Arthur. “Muslims and ecology: fostering Islamic environmental ethics.” *Contemporary Islam* 6, Issue 2 (July 2012): 155–71. Accessed May 6, 2015. DOI: 10.1007/s11562-011-0173-8.
- Schultz, P. Wesley, Zelezny, Lynnette, and Nancy J. Darlymple. “A Multinational Perspective on the Relation between Judeo-Christian Religious Beliefs and Attitudes of Environmental Concern.” *Environment and Behavior* 32, no. 4 (July 2000): 576–91. Accessed November 7, 2015. DOI: 10.1177/00139160021972676.

- Setia, Adi. "The Inner Dimension of Going Green: Articulating an Islamic Deep-Ecology." *Islam and Science* 5, no. 2 (Winter 2007): 117–50.
- Sherkat, Darren E., and Christopher G. Ellison. "Structuring the Religion-Environment Connection: Identifying Religious Influences on Environmental Concern and Activism." *Journal for the Scientific Study of Religion* 46, no. 1 (2007): 71–85. DOI: 10.1111/j.1468-5906.2007.00341.x.
- Shove, Elizabeth. "Beyond the ABC: climate change policy and theories of social change." *Environment and Planning* 42, no. 6 (2010): 1273–85.
- Shukri, Ahmad, and Musa Yusuf Owoyemi. "The Concept of Islamic Work Ethic: An Analysis of Some Salient Points in the Prophetic Tradition." *International Journal of Business and Social Science* 3, no. 20 (Special Issue October 2012): 116–23. Accessed May 12, 2015. http://ijbssnet.com/journals/Vol_3_No_20_Special_Issue_October_2012/12.pdf.
- Simkins, Ronald A., ed. "Religion and the Environment." *Journal of Religion and Society*, Supplement Series 3 (2008): 47–65.
- Snow, David A., and Robert D. Benford. "Ideology, Frame Resonance and Participant Mobilization." *International Social Movement Research* 1 (1988): 197–218.
- Snow, David A., and Scott C. Byrd. "Ideology, Framing Processes, and Islamic Terrorist Movements." *Mobilization: An International Quarterly* 12 (2007): 119–36. Accessed June 12, 2015. <https://webfiles.uci.edu/sbyrd/home/terroristmovements.snow.byrb.2007.pdf>.
- Snow, David A., Rochford, E. Burke, Jr., Worden, Steven K., and Robert D. Benford. "Frame Alignment Processes, Micromobilization, and Movement Participation." *American Sociological Review* 51, no. 4 (August 1986): 464–81. Accessed February 6, 2015. <http://www.jstor.org/stable/2095581>.
- Solihu, A.K.H. "Valuing Biodiversity: A Qur'anic Account." *International Journal of Environmental Science and Development* 5, no. 3 (June 2014): 244–50. Accessed June 8, 2015. DOI: 0.7763/IJESD.2014.V5.486.
- Stauffer, Robert C. "Haeckel, Darwin, and Ecology." *The Quarterly Review of Biology* 32, no. 2 (June 1957): 138–44. Accessed June 15, 2015. <http://www.jstor.org/stable/2816117>.
- Stern, Paul C., Diez, Thomas, Abel, Troy, Guagnano, Gregory A., and Linda Kalof. "A Value-Belief-Norm Theory of Support for Social Movements: The Case of Environmentalism." *Human Ecology Review* 6, no. 2 (1999): 81–97. Accessed May 7, 2016.

- <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.195.5415&rep=rep1&type=pdf>.
- Taylor, Bron. "A Green Future for Religion?" *Futures* 36 (2004): 991–1008. Accessed September 3, 2016. http://www.brontaylor.com/environmental_articles/pdf/Taylor--GreenFuture4Rel.pdf.
- _____. "Gaian Earth Religion and the Modern God of Nature," *Phi Kappa Phi Forum* 91, no. 2 (Summer 2011): 12–15. Accessed September 7, 2015. http://www.brontaylor.com/environmental_articles/pdf/Taylor--GaiaModGod.pdf.
- _____. "The Greening of Religion Hypothesis (Part One): From Lynn White, Jr. and claims that religions can promote environmentally destructive attitudes and behaviors to assertions they are becoming environmentally friendly." Post-copy edited version slated for publication in the *Journal for the Study of Religion, Nature and Culture* 10, no. 3 (2016): n.p.. Accessed August 31, 2016. <https://florida.academia.edu/BronTaylor>.
- Taylor, Bron, Van Wieren, Gretel, and Bernard Zaleha, "The Greening of Religion Hypothesis (Part Two): Assessing the Data from Lynn White, Jr. To Pope Francis." Post-copy edited version slated for publication in the *Journal for the Study of Religion, Nature and Culture* 10, no. 3 (2016): n.p.. Accessed August 31, 2016. <https://florida.academia.edu/BronTaylor>.
- Taylor, Michael, and Hugh Ward. "Chickens, Whales, and Lumpy Goods: Alternative Models of Public-Goods Provision." *Political Studies* 30, no. 3 (1982): 350–70.
- Thaler, Richard. "Toward a positive theory of consumer choice." *Journal of Economic Behavior and Organization* 1 (1980): 39–60. Accessed June 1, 2014. <http://www.eief.it/butler/files/2009/11/thaler80.pdf>.
- Touraine, Alain. "Les mouvements sociaux: objet particulier ou problème central de l'analyse sociologique?" *Revue Française de Sociologie* XXV (1984): 3–19.
- Toynbee, Arnold. "The Religious Background of the Present Environmental Crisis: A viewpoint." *International Journal of Environmental Studies* 3 (1972): 141–46. Accessed February 3, 2015. DOI: <http://dx.doi.org/10.1080/00207237208709505>.
- Troster, Lawrence. "What is Eco-Theology?" *Cross Currents* 63, Issue 4 (18 December 2013): 380–5. Accessed May 7, 2016. DOI: 10.1111/cros.12043.
- Tuckness, Alex. "Locke's Political Philosophy." *The Stanford Encyclopedia of Philosophy* (Winter 2012), edited by Edward N.

- Zalta. Accessed May 12, 2015. <http://plato.stanford.edu/archives/win2012/entries/locke-political/>.
- White, Lynn, Jr. "The Historical Roots of Our Ecologic Crisis." *Science* 155, no. 3767 (10 March 1967): 1203–1207. Accessed May 6, 2015. <http://www.jstor.org/stable/1720120>.
- Whitmarsh, Lorraine. "What's in a name? Commonalities and differences in public understanding of 'climate change' and 'global warming'." *Public Understanding of Science* 18, no. 4 (2009): 401–20. Accessed June 4, 2014. DOI: 10.1177/0963662506073088.
- Whitney, Elspeth. "Lynn White Jr.'s 'The Historical roots of our ecological crisis' after 50 Year." *History Compass* 13, no. 8 (2015): 396–410. Accessed May 5, 2015. DOI: 10.1111/hic3.12254.
- Yucel, Salih, and Selma Sivri. "Said Nursi's Approach to the Environment: A Spiritual View on the Book of Universe." *Insights* 1, Issue 4 (June 2009): 77–96.
- Zaidi, Iqtidar H. "On the Ethics of Man's Interaction with the Environment: An Islamic Approach." *Environmental Ethics* 3, no. 1 (Spring 1981): 35–47.

Internet sources, reports, academic papers, newspaper articles

- Abdel Raouf, Mohamed. "Middle East Revolutions: An Environmental Perspective." *The Environment and the Middle East, Regional and International Cooperation* 3, Middle East Institute Viewpoints (June 2011): 27–31. Accessed May 5, 2015. <https://www.files.ethz.ch/isn/130332/EnvironmentVPVol3.pdf>.
- Abu-Sway, Mustafa. "Toward an Islamic Jurisprudence of the Environment (Fiqh al-Bi'ah fi'l-Islam)." Lecture presented at Belfast Mosque, February 1998, <https://www.missionislam.com/science/enviroment.html>, last updated June 20, 1999.
- Ahmad, Husna, ed., "Islam and Water: The Hajjar (r.a.) Story and Guide." Produced and directed by M. Islam. Media and Communications, Global One, 2015. Accessed May 8, 2016. <https://www.youtube.com/watch?v=S2tDhldp2fw>.
- Al-Aqeedi, Rasha. "Hisba in Mosul: Systematic Oppression in the Name of Virtue." Occasional Paper, GW Program on Extremism, George Washington University, February 2016. Accessed July 7, 2016. https://cchs.gwu.edu/sites/cchs.gwu.edu/files/downloads/AlAqeedA_Paper.pdf.
- Al-Hussein, Noor. "Islam, faith and climate change." *Qantara.de*, September 28, 2015. Accessed October 6, 2015. <https://en.qantara.de/content/eco-islam-noor-al-hussein-speaks-out-islam-faith-and-climate-change>.

- Ali Gomaa (website). Accessed January 9, 2015. <http://draligomaa.org/>.
- Al-Jayyousi, Odeh. "Hima as a model for natural resource management in West Asia and North Africa." *IUCN*, August 11, 2010. Accessed May 7, 2015. <https://www.iucn.org/node/6593>.
- Alliance of Religions and Conservation (ARC). "The Green Guide for Hajj." Bath, UK: ARC, 2011. Accessed February 6, 2015. http://www.arcworld.org/downloads/Green_Guide_for_Hajj.pdf.
- _____. "Faiths & Ecology." *ARC*. Accessed July 6, 2015. http://www.arcworld.org/arc_and_the_faiths.asp.
- _____. "Long term plan." Accessed May 8, 2016. <http://www.arcworld.org/faiths.asp?pageID=165>.
- _____. "Islamic Faith Statement." Accessed July 7, 2015. <http://www.arcworld.org/faiths.asp?pageID=75>.
- _____. "The Muslim Declaration on Nature - Assisi 1986." *ARC*. Accessed July 6, 2015. <http://www.arcworld.org/faiths.asp?pageID=132>.
- American Library Association and Library of Congress (The), (ALA-LC) Romanisation Table, Arabic, 2012. Accessed September 4, 2016. <http://www.loc.gov/catdir/cps/romanization/arabic.pdf>.
- Angyal, Andrew J. "Thomas Berry's Earth Spirituality and the 'Great Work'." Originally presented at Works of Love – Scientific & Religious Perspectives on Altruism, May 31st-June 5th, 2003. Published in *The Ecozoic Reader* 3, no. 3 (Spring 2003): 35–44. Accessed May 8, 2015. http://www.ratical.org/many_worlds/GreatWork.html.
- Atallah, Sami. "Garbage Crisis: Setting the Record Straight." The Lebanese Center for Policy Studies (LCPS), August 2015. Accessed September 5, 2015. <http://www.lcps-lebanon.org/featuredArticle.php?id=48>.
- Austin, Kimberly. "Green Deen Interview with Ibrahim Abdul-Matin." *Islam & Science TV*, October 21, 2013. Accessed March 15, 2015, <https://www.youtube.com/watch?v=I1crKwQosO4>.
- Badat, Bilal. "Eco-mosque is another powerful symbol of Islamic ingenuity." *The Guardian*, June 24, 2011. Accessed July 7, 2015. <http://www.theguardian.com/commentisfree/belief/2011/jun/24/eco-mosque-wind-turbine>.
- Bagader, Abubakr Ahmed, El-Shirazi El-Sabbagh, Addullatif Tawfik, Al-Glayand, Mohammed As-Sayyid, Izzi-Dien al-Samarrai, Mawil Y., and Othman Abd-ar-Rahman Llewellyn. *Islamic Principles for the Conservation of the Natural Environment (IPCNE)*. Gland, Switzerland and Cambridge, UK: IUCN, 1983.
- _____. "Environmental Protection in Islam." *IUCN Environmental Policy and Law Paper* 20. Second revised edition. Gland, Switzerland and

- Cambridge, UK: IUCN, 1994. Accessed May 6, 2016. http://cmsdata.iucn.org/downloads/eplp_020reven.pdf.
- Batliwala, Srilatha. *Changing Their World: Concepts And Practices Of Women's Movements*. 2nd edn. Toronto: Association for Women's Rights in Development – AWID, 2012. Accessed June 3, 2016, http://www.awid.org/sites/default/files/atoms/files/changing_their_world_2ed_full_eng.pdf.
- Begum, Lotifa. *The Islamic Climate Change Declaration Toolkit*. Birmingham, UK: Islamic Relief Worldwide, 2015. Accessed December 6, 2015. http://policy.islamic-relief.com/wp-content/uploads/2015/11/climate_toolkit_v5.pdf.
- Bin Abu Bakar, Muhammad Fauzan. "Colours of Islam." *Academia.edu*, 2015. Accessed May 17, 2016. https://www.academia.edu/6434115/Colours_of_Islam.
- BirdLife International Middle East. "Hima traditional land designation." BirdLife International. Accessed October 6, 2016. <http://www.birdlife.org/middle-east/projects/hima-traditional-land-designation>.
- Bond, Patrick. "Climate-crisis capitalism, global environmental governance and geopolitical competition in emissions laxity." Article presented at the International Labour Rights Information Group Globalization School on Capitalism and the Environment, October 3, 2011. Accessed May 8, 2015. <http://amandla.org.za/climate-crisis-capitalism-global-environmental-governance-and-geopolitical-competition-in-emissions-laxity-by-patrick-bond/>.
- Brown, Jihad Hashim. *Metaphysical Dimensions of Muslim Environmental Consciousness*. Tabah Essays Series 3. Abu Dhabi, U.A.E: Tabah Foundation, 2013. Accessed March 8, 2016. <http://www.tabahfoundation.org/research/pdfs/Jihad-Brown-Metaphysical-dimensions-Tabah-Essay-En.pdf>.
- Chalquist, Craig. "A Glossary of Ecological Terms." *terrapsych.com*. Accessed October 12, 2016. <http://www.terrapsych.com/ecology.html>.
- Clark, Andrew. "Anonymising Research Data." Economic & Social Research Council (ESRC), ESRC National Centre for Research Methods, NCRM Working Paper Series 7/06 (December 2006). Accessed October 6, 2015. <http://www.reallifemethods.ac.uk/research/wps/>.
- Clean Medina* (blog). Accessed May 7, 2016. <http://cleanmedina.blogspot.it/>.
- Cooke, Kieran. "Muslim scholars say climate change poses dire threat." *The Climate News Network*, July 15, 2015. Accessed August 1,

2015. <http://climateneWSnetwork.net/muslim-scholars-say-climate-change-poses-dire-threat/>.
- Costanza, Robert. "What is ecological economics?" *Yale Insights*, May 11, 2010. Interview conducted and edited by Ted O'Callahan. Accessed March 2, 2015. <http://insights.som.yale.edu/insights/what-is-ecological-economics>.
- Couturier, Anna, and Kannika Thaimai. "Eating the Fruit of the Poisonous Tree? Ecological Modernisation and Sustainable Consumption in the EU." *IPE Working Papers* 20 (2013). Berlin School of Economics and Law, Institute for International Political Economy (IPE). Accessed May 8, 2016. http://www.ipe-berlin.org/fileadmin/downloads/working_paper/ipe_working_paper_20.pdf.
- Dalai Lama, "Environment: His Holiness the Dalai Lama's speeches and messages on the environment." *His Holiness The 14th Dalai Lama of Tibet*. Accessed May 7, 2016. <http://www.dalailama.com/messages/environment>.
- Deuraseh, Nurdeng. "Earth in the Holy Qur'an: how to protect and maintain it?" Paper presented at the Conference on Land Degradation in Dry Environments, Kuwait University, Kuwait, March 8th-14th 2009. Accessed May 12, 2015, <http://www.ukm.my/jhadhari/makalah/v2n22010/makalah-v2n2-n4.pdf>.
- Dickinson, Daniel. "Eco-Islam hits Zanzibar fishermen: BBC STORY." *BBC News*, February 17, 2005. Accessed March 7, 2015. <http://www.arcworld.org/news.asp?pageID=70>.
- Dolenec, Danijela, Majstorović, Danijela, Medarov, Georgi, Sekulić, Dubravka, Simović, Vladimir, and Tomislav Tomašević. "The Struggle for the Commons in the Balkans." Grupa 22 Working Paper Series, 2013. Accessed May 12, 2015. http://www.grupa22.hr/wp-content/uploads/2014/01/G22-WP-Struggle-for-the-Commons_Balkan-Forum-2013.pdf.
- Dreier, Peter. "Remembering Barry Commoner," *The Nation*, October 1, 2012, accessed May 6, 2016. <http://www.thenation.com/article/remembering-barry-commoner/>.
- Dudley, Nigel, Higgins-Zogib, Liza, and Stephanie Mansourian, eds. *Beyond Belief: Linking faiths and protected areas to support biodiversity conservation*." Research report by WWF, Equilibrium and the Alliance of Religions and Conservation (ARC) (WWF, December 2005). Accessed July 7, 2015. <http://www.arcworld.org/downloads/WWF%20Beyond%20Belief.pdf>.

- Dutton, Yasin. "Islam and the Environment: A Framework for Inquiry." *Faiths and the Environment: Conference Papers*, 46–70. *Faith in Dialogue*, no. 1. London: Centre for Inter-Faith Dialogue, 1996.
- Earth Charter Initiative. "The Earth Charter: Preamble." Accessed October 6, 2015. <http://earthcharter.org/discover/the-earth-charter>.
- Eco Muslim (The). "10 Things Every Green Mosque Should Have: Green Mosque Guide," 2013. Accessed May 19, 2015. <http://www.theecomuslim.com/2013/08/10-things-every-green-mosque-should-have.html>.
- Ekklesia. "Lutheran World Federation announces decision not to invest in fossil fuels," *Ekklesia Daily Bulletin*, London-Edinburgh, June 23, 2015, accessed July 1, 2015. <http://www.ekklesia.co.uk/node/21822>.
- Etherington, Kim. "Narrative approaches to case studies." Power Point Presentation. Accessed October 20, 2016. <http://www.keele.ac.uk/media/keeleuniversity/facnatsci/schpsych/documents/counselling/conference/5thannual/NarrativeApproachesstoCaseStudies.pdf>.
- Fairlie, Simon. "A Short History of Enclosure in Britain." *The Land*, Issue 7 (Summer 2009). Accessed April 9, 2015. <http://www.thelandmagazine.org.uk/articles/short-history-enclosure-britain>.
- Faith In Action DC. "Sarah Jawaid of Green Muslims." *YouTube*, April, 22, 2012. Accessed February 6, 2015. <https://www.youtube.com/watch?v=YyFYNNxWUPU>.
- Fevrier, Gary. "Water For Life." *Gary Fevrier* (blog), March 6, 2010. Accessed May 6, 2015. <http://garryfevrier.blogspot.it/2010/03/water-for-life.asp>.
- Fischer-Kowalski, M., Haas, W., Wiedenhofer, D., Weisz, U., Pallua, I., Possaner, N., Behrens, A., Serio, J., Alessi, M., and Weis, E. *Socio-ecological Transitions: Definitions, Dynamics and Related Global Scenarios*, NEUJOBS, Global Scenarios/ Milestone no. 3, Working paper/D 1.2 (2012). Accessed May 7, 2016. <http://www.neujobs.eu/publications/socio-ecological-transition-and-employment-implications/socio-ecological-transitions-de>.
- Foltz, Richard C. "The Globalization of Muslim Environmentalism." *Zëri Islam*. August 27, 2009. Accessed May 19, 2016. <http://www.zeriislam.com/artikulli.php?id=942>.
- Frantzeskaki, Niki, van Daalen, Els, and Slinger, Jill H. "Detecting and directing socio-ecological transitions: A transition management approach." Paper presented at the International Society of Ecological Economics, 8th International Conference ISEE 2008 "Nairobi: Applying Ecological Economics for social and environmental sustainability." Nairobi, Kenya, August 7th–11th,

2008. Accessed May 9, 2016. http://www.tbm.tudelft.nl/fileadmin/Faculteit/TBM/Over_de_Faculteit/Afdelingen/Afdeling_Multi_Actor_Systems/Sectie_Beleidsanalyse/Medewerkers/Niki_Frantzeskaki/doc/ISEE2008_paper.pdf.
- Gani, Aisha. "Dolce & Gabbana launches luxury hijab collection." *The Guardian*, January 7, 2016. Accessed February 8, 2016. <http://www.theguardian.com/world/2016/jan/07/dolce-gabbana-debuts-luxury-hijab-collection>.
- GIZ (The Deutsche Gesellschaft für Internationale Zusammenarbeit). *Algeria: Teaching about Biodiversity*, GIZ, February 2016. Accessed March 7, 2016. <https://www.giz.de/expertise/downloads/giz2016-en-religion-algeria-best-practice.pdf>.
- Global Buddhist Climate Change Collective (GBCCC). *Buddhist Climate Change Statement to World Leaders 2015*, October 29, 2015. Accessed May 8, 2015. <https://gbccc.org/buddhist-climate-change-statement-to-world-leaders-2015/>.
- Gori, Paula, Parcu, Pier Luigi, and Maria Luisa Stasi. "Smart Cities and Sharing Economy." *EUI Working Paper RSCAS 96* (December 2015). Accessed October 6, 2016. <http://dx.doi.org/10.2139/ssrn.2706603>.
- Green Deen South Africa (website). Accessed May 8, 2015. <http://greendeensa.org/>.
- GreenFaith (website). Accessed January 9, 2015. <http://www.greenfaith.org/>.
- Green Fuse, The. Last modified July 2015. Accessed February 7, 2016. <http://www.thegreenfuse.org/glossary.htm>.
- Green Muslims in the District, "Green Muslim Dinner-Iftar I: October 5, 2007; Arlington, VA." *DC Green Muslims* (blog), November 13, 2007. Accessed February 6, 2015. <http://dcgreenmuslims.blogspot.it/2007/11/green-iftar-october-5-2007.html>.
- Green Ramadan* (blog). Accessed March 6, 2015. <http://greenramadan.com/>.
- Halstead, John. "How Deep Is Your Ecology?" *Humanistic Paganism* (blog), April 10, 2015. Accessed May 6, 2016. <http://humanisticpaganism.com/2015/04/10/how-deep-is-your-ecology-by-john-halstead/>.
- Hamad, Ruby. "Halal: Perspectives on Intersecting Oppressions from a Muslim Vegan Feminist." *Earthing Liberation Kollektive – ELK*, April, 3, 2015. Accessed June 6, 2016. <http://humanrightsareanimalrights.com/2015/04/03/ruby-hamad-halal-perspectives-on-intersecting-oppressions-from-a-muslim-vegan-feminist/>.

- Hamarnah, Sami. "Origin and Functions of the Ḥisbah System in Islam and its Impact on the Health Professions." *Sudhoffs Archiv für Geschichte der Medizin und der Naturwissenschaften*, Bd. 48, H. 2 (1964): 157–73. Accessed July 5, 2015. <http://www.jstor.org/stable/20775086>.
- Haque, Nicolas. "Senegal imam calls for 'green jihad'." *Al-Jazeera English* (blog), August 5, 2015. Accessed August 7, 2015. <http://www.aljazeera.com/blogs/africa/2015/08/senegal-imam-calls-green-jihad-150805051318929.html>.
- Hardin, Garrett. "The Tragedy of the Commons." *Science* 162, Issue 3859 (December 1968): 1243–8. Accessed May 11, 2015. DOI: 10.1126/science.162.3859.1243.
- Hasina Wajed, Speech given at the 70th Session of the United Nations General Assembly (UNGA). Accessed May 19, 2016. <https://www.youtube.com/watch?v=N8ptUpCo6zk>.
- Hessekiel, Sophie. "Interfaith Activist Amanda Quaraishi on Islam and the Eco." *Eco-Chick*, August 20, 2015. Accessed September 2, 2015. <http://eco-chick.com/2015/08/33529/interfaith-activist-amanda-quaraishi-on-islam-and-the-eco/>.
- Heyndrickx, Christophe, Frederix, Rodric, and Joko Purwanto. "Sustainable Urban Transport Strategies and Job Creation." NEUJOBS Project, Working Paper, no. 15.3 (2013). Accessed August 9, 2015. http://www.neujobs.eu/sites/default/files/NEUJOBS_D15_3_2013_2013_finalpdf.pdf.
- Hijabtrendz (website). Accessed May 7, 2016. <http://www.hijabtrendz.com/>.
- "Holism." (n.d.) In *Oxford Dictionaries Online*. Accessed March 8, 2015. <https://en.oxforddictionaries.com/definition/holism>.
- Horn, Jessica. "Engendering Social Movements: Evolution, Definitions, Debates and Resources." In *Gender and Social Movements: Overview Report*, 19–34. Brighton, UK: University of Sussex, BRIDGE - Institute of Development Studies, 2013. Accessed June 3, 2016. <http://docs.bridge.ids.ac.uk/vfile/upload/4/document/1401/FULL%20REPORT.pdf>.
- Howard S.J., Damian. "An Islamic Declaration on Climate Change." *Thinking Faith*, October 29, 2015. Accessed March 4, 2016. https://www.thinkingfaith.org/articles/islamic-declaration-climate-change#_edn15.
- Hussain, Muzammal. "Environmental Perspectives: Islam and Ecologism," 2004 [online]. Accessed May 16, 2016. <http://wisdominnature.org/resources/islamicecology/>.

- Interfaith Power & Light (IPL) (website). Accessed May 7, 2015. <http://www.interfaithpowerandlight.org>.
- Interfaith Summit on Climate Change. "About the Summit." *World Council of Churches (WCC)*. Last modified 2014. Accessed May 9, 2015. <http://interfaithclimate.org/about-the-summit>.
- Intergovernmental Panel on Climate Change (IPCC). *IPCC Fourth Assessment Report: Climate Change 2007*, Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, edited by R.K. Pachauri and A. Reisinger. Geneva, Switzerland: IPCC, 2013. Accessed March 7, 2015. http://www.ipcc.ch/publications_and_data/ar4/syr/en/contents.htm.
- _____. *Climate Change 2013: The Physical Science Basis*. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, edited by Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley. Cambridge, UK-New York, US: Cambridge University Press. Accessed October 12, 2016. http://www.ipcc.ch/pdf/assessment-report/ar5/wg1/WG1AR5_Frontmatter_FINAL.pdf.
- Islamic Educational, Scientific and Cultural Organization (ISESCO). "Strategy for the Management of Water Resources in the Islamic World." Accessed June 7, 2015. <http://www.isesco.org.ma/wp-content/uploads/2015/05/Strategy-for-management-of-water-resources-in-the-Islamic-World.pdf>.
- Islamic Foundation for Ecology and Environmental Sciences (IFEES) (website). Accessed January 6, 2015. <http://www.ifees.org.uk/>.
- _____. *Muslim Green Guide to Reducing Climate Change*. Co-published with UK LifeMakers and Muslim Hands, 2008. Accessed May 26, 2015. <http://www.ifees.org.uk/wp-content/uploads/2015/04/1375186536.pdf>.
- _____. "Muslim Green Guide – Interview with Amr Khaled." Co-sponsored by LifeMakers, September 2008. Accessed May 27, 2015. <http://www.ifees.org.uk/green-guide-for-muslims/>.
- _____. "Clean Medina," *YouTube*, June 12, 2013. Accessed June 6, 2015. <https://www.youtube.com/watch?v=VZdNqJ9WGFg>.
- Islamic Relief Worldwide (IRW), "UK rallies to call for climate action." Accessed September 20, 2015. <http://www.islamic-relief.org/uk-rallies-to-call-for-climate-action/>.
- _____. *Climate Change Policy*. Birmingham, UK: Islamic Relief Worldwide, December 2014. Accessed May 27, 2015. http://www.muslimclimateaction.org.uk/wp-content/uploads/2015/05/POLICY_CLIMATE_WEB_V1.pdf.

- Islamic Relief Worldwide (IRW), Islamic Foundation for Ecology and Environmental Sciences (IFEES), Islamic Educational, Scientific and Cultural Organization (ISESCO), GreenFaith. "Islamic Declaration on Global Climate Change." International Islamic Climate Change Symposium, Istanbul, Turkey, August 17–18, 2015. Accessed May 7, 2016. <http://islamicclimatedeclaration.org/islamic-declaration-on-global-climate-change/>.
- Islamic Sciences & Research Academy (ISRA). "Environmental Ethics in Islam." ISRA Australia, Power Point Presentation. Accessed June 5, 2016. <http://www.ceosyd.catholic.edu.au/Parents/Religion/Documents/20130715-doc-EnvironmentalEthicsIslam.pdf>.
- Khaleafa.com, "Green Khutba: Awakening Our Stewardship Responsibility Through Action." Accessed May 19, 2016. <http://www.khaleafa.com/green-khutbah-campaign/>.
- Khalid, Fazlun. "Islam and the Environment - Ethics and Practice. An Assessment." Paper presented at the 15th General Conference on The Environment in Islam, Amman, the Hashemite Kingdom of Jordan, September 27th–29th, 2010. Accessed May 3, 2015. <http://www.ifees.org.uk/wp-content/uploads/2015/04/1379669287.pdf>.
- Laurent, Éloi, and Philippe Pochet. "Towards a social-ecological transition. Solidarity in the age of environmental challenge." The European Trade Union Institute (ETUI), 2015. Accessed March 8, 2016. <http://www.etui.org/Publications2/Guides/Towards-a-social-ecological-transition.-Solidarity-in-the-age-of-environmental-challenge>.
- Lawrence, Carmen. "Opportunities for shaping individual behaviours through communicating the science of climate change." Paper presented at the Australian Science Communicators Hot Air Symposium, Perth, Australia, March 24th, 2009. http://www.asc.asn.au/wp-content/uploads/2009/08/lawrencehotairtalk_march20092.pdf, accessed June 24, 2014.
- Lee, Jai-Don. "Thomas Berry's New Cosmology and the Ecozoic Era." In *Proceedings of Eco-Sophia Symposium 2011*, 43–4. Paper presented at the Plenary Session – 8th International Whitehead Conference, "Creativity and Harmony: The Way of Eco-Sophia for the Future of Civilization. The Yotsuya Campus, Sophia University, Tokyo, Japan, September 26th–29th, 2011. Accessed March 5, 2015. <http://iwc8-japan.com/proceedings/Plenary.pdf>.
- Letsch, Constanze. "Turkey protests spread after violence in Istanbul over park demolition." *The Guardian*, June 1, 2013. Accessed June

- 9, 2016.
<https://www.theguardian.com/world/2013/may/31/istanbul-protesters-violent-clashes-police>.
- Loki. "Marshall Ganz on Narrative and Social Movements." *Shouting Loudly* (blog). Accessed October 4, 2016. <http://www.shoutingloudly.com/2009/04/01/823/>.
- Marshall, George, Corner, Adam, Roberts, Olga, and Jamie Clarke. "Faith & Climate Change – A guide to talking with the five major faiths." Oxford: Climate Outreach, 2016. Accessed March 6, 2016. <http://climateoutreach.org/resources/climate-change-faith/>.
- Massachusetts Institute of Technology, MIT OpenCourseWare (OCW), Civil and Environmental Engineering, "Ecology I: The Earth System," "Lecture 1- Introduction to Ecology." Instructors: Prof. Edward DeLong and Prof. Penny Chisholm, MIT Course Number 1.018J / 7.30J (Massachusetts Institute of Technology, Fall 2009). Accessed March 4, 2015. http://ocw.mit.edu/courses/civil-and-environmental-engineering/1-018j-ecology-i-the-earth-system-fall-2009/lecture-notes/MIT1_018JF09_Lec01.pdf.
- Mattei, Ugo. "The State, the Market, and some Preliminary Questions about the Commons." *IUC Research Commons*, International University College of Turin, 2011. Accessed May 1, 2015. http://ideas.iuctorino.it/RePEc/iuc-rpaper/1-11_Mattei.pdf.
- Medomed.org. "The Islamic Awqaf for Fauna." Accessed May 19, 2015. <http://medomed.org/2013/the-islamic-awqaf-with-fauna/>.
- Mohd Noor, Mohd Fakhri. "The function of Hisbah and its Contemporary Context." *Sharia Aspects in Business and Finance (SABF)*. University of Selangor, UNISEL, 2014. Accessed February 1, 2015. https://www.academia.edu/6721320/The_function_of_Hisbah_ana_its_Contemporary_Context.
- Moyers & Company. "Spirit & Nature." June 5, 1991. Last accessed August 31, 2016. <http://billmoyers.com/content/spirit-nature/>.
- Muslim Action for Development & Environment (MADE). *The Green Up! Toolkit – A Guide and Award Scheme for Mosques and Islamic Groups*. London, UK: MADE in Europe, 2013. Accessed May 7, 2016. <http://www.arcworld.org/downloads/Green-Up-My-Community-Toolkit.pdf>.
- _____. "Green Up! Award." Accessed May 6, 2016. <https://www.made.ngo/get-involved/eco-ambassador-2>.
- Muslim Climate Action (website). Accessed June 20, 2015. <http://www.muslimclimateaction.org.uk/>.
- "Muslim Vegan Community's Facebook page." Facebook.com (social media website). Accessed February 9, 2016. <https://www.facebook.com/groups/muslimnraw/?fref=ts>.

- Nouh, Muhammad. "Sustainable Development in a Muslim Context." Accessed June 1, 2016. http://earthcharter.org/invent/images/uploads/11%20Manuscrip_Muhammad.pdf.
- Obe, Husna Ahmad. *Islam and Water: The Hajjar (r.a.) Story and Guide*. London: Global One, 2015. Accessed May 18, 2016. <http://www.globalone2015.org/wp-content/uploads/2015/03/Hajjar-Story.pdf>.
- _____. *Islamic Farming: A Toolkit for Conservation Agriculture* (UK: ARC and Global One, 2015), accessed March 7, 2016, http://www.muslimclimateaction.org.uk/wp-content/uploads/2015/05/Islamic_Farming.pdf.
- One Arab Vegan* (blog). Accessed March 6, 2015. <http://www.onearabvegan.com/>.
- Organisation for Economic Co-operation and Development, The. (OECD)., "Ecological Ethics." In *Glossary of Environment Statistics*, Studies in Methods, Series F, No. 67. New York, United Nations, 1997. Glossary entry created on September 25, 2001. Last updated on November 6, 2001. Accessed October 13, 2015. <https://stats.oecd.org/glossary/detail.asp?ID=716>.
- _____. "Annex A. Game Theory and Collective Action." In *Providing AgriEnvironmental Public Goods through Collective Action*. Paris: OECD Publishing, 2013. Accessed May 7, 2015. DOI: <http://dx.doi.org/10.1787/9789264197213-20-en>.
- Oxford Centre for Hindu Studies/Bhumi Project (The), in partnership with The Hindu American Foundation (HAF), GreenFaith, and OurVoices. *Bhumi Devi ki Jai! A Hindu Declaration on Climate Change*, November 23, 2015, <http://www.hinduclimatedeclaration2015.org/english>.
- Parliament of the World's Religions, The. (website). Accessed September 5, 2015. <https://www.parliamentofreligions.org/>.
- Parvez Manzoor (website). Accessed May 8, 2016. <http://pmanzoor.info/Index1.html>.
- Pelenc, Jérôme, and Tom Dedeurwaerdere. "Weak Sustainability versus Strong Sustainability." Brief for the UN Global Sustainable Development Report, 2015. Accessed January 9, 2016. <https://sustainabledevelopment.un.org/content/documents/6569126-Pelenc-Weak%20Sustainability%20versus%20Strong%20Sustainability.ppp>.
- Pope Francis, "Encyclical Letter *Laudato Si'* of the Holy Father Francis on Care for Our Common Home." Vatican City, The Holy See, Encyclical Letter May 24, 2015. Accessed June 7, 2016.

- http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html.
- ____. "Address of the Holy Father." Visit to the Joint Session of the United States Congress, United States Capitol, Washington, D.C., September 24, 2015. Accessed May 9, 2016. http://w2.vatican.va/content/francesco/en/speeches/2015/septembes/documents/papa-francesco_20150924_usa-us-congress.html.
- ____. "Address of the Holy Father." Meeting with the Members of the General Assembly of the United Nations Organization, United Nations Headquarters, New York, September 25, 2015. Accessed May 9, 2016. http://w2.vatican.va/content/francesco/en/speeches/2015/septembes/documents/papa-francesco_20150925_onu-visita.html.
- Pope Paul VI. *Populorum Progressio*. Encyclical of Pope Paul VI on the Development of Peoples, March 26, 1967. Accessed February 7, 2016. http://w2.vatican.va/content/paul-vi/en/encyclicals/documents/hf_p-vi_enc_26031967_populorum.html.
- Priyambodo, R.H. "MUI fatwa on environment normative reference." *Antara News*, July 27, 2011. Accessed February 8, 2015. <http://www.antaranews.com/en/news/74166/mui-fatwa-on-environment-normative-reference>.
- Purchia, Robyn. "Islamic Beliefs About GMOs." *EdenKeeper*, June 18, 2015. Accessed July 1, 2015. <http://edenkeeper.org/2015/06/18/islamic-beliefs-about-gmos/>.
- Queen, Audrey. *Greening Islam: How the Green Muslims are combating climate change*, illustrated by Lucy Bellwood, *The Nib – Medium*, June 30, 2014. Accessed July 2, 2015. <https://medium.com/the-nib/greening-islam-53f697bdb819#jde4aofkm>.
- Rawmadan* (blog). Accessed July 6, 2015. <https://rawmadan.wordpress.com/>.
- Renewal Project, The. "Food for Faith." Accessed May 7, 2016. http://www.renewalproject.net/film/story/food_for_faith.
- Rotmans, Jan. "Societal Innovation: Between Dream and Reality Lies Complexity," DRIFT Research Working Paper, June 3, 2005.
- Schwencke, Anne Marieke. *Globalized Eco-Islam: A Survey of Global Islamic Environmentalism*. Final report to Leiden University Fund pilot study, March 2011. Leiden Institute for Religious Studies (LIRS), Leiden University. Revised (draft): 23 February 2012. Accessed February 10, 2016. <http://media.leidenuniv.nl/legacy/report-globalized-eco-islam-a-survey-schwencke-vs-24-february-2012-pdf.pdf>.

- Shafaat, Ahmad. "Ecology and the Teachings of the Prophets Muhammad and Jesus." *Islamic Perspectives*, 1999. Accessed March 8, 2016. <http://www.islamicperspectives.com/Ecology.htm>.
- Shellenberger, Michael, and Ted Nordhaus. *The Death of Environmentalism. Global Warming Politics in a Post-Environmental World*. Oakland, CA: The Breakthrough Institute, 2004. Accessed April 8, 2015. http://www.thebreakthrough.org/images/Death_of_Environmental_Env.pdf.
- Srouji, Mayada. "Why I believe today's Muslims should support veganism." *Mvslim*, November 1, 2015. Accessed December 7, 2015. <http://mvslim.com/why-i-believe-todays-muslims-should-support-veganism/>.
- Steiner, Achim. "Making history." Reflections, *Our Planet Magazine*, UNEP. Accessed September 6, 2016. <http://www.unep.org/OurPlanet/2013/feb/EN/reflections.asp>.
- Swedish International Development Cooperation Agency, "Environmental and Climate Change Policy Brief - MENA," Environmental and Climate Change Analysis by Gunilla Ölund Wingqvist and Olof Drakenberg at the request of Sida (Att.: Hazme Aykol). Gothenburg: Environmental Economics Unit, University of Gothenburg, 2010. Accessed May 6, 2015. http://sidaenvironmenthelpdesk.se/wordpress3/wp-content/uploads/2013/04/MENA_Env-CC-Policy-Brief-2010.pdf.
- Touza, Julia Montero, and Charles Perrings. "The provision of international environmental public goods." In *Ecosystem Services Economics (ESE) Working Paper Series* 16, 11–21. Nairobi, Kenya: The United Nations Environment Programme (UNEP), 2011.
- United Nations, "News on Millennium Development Goals." [online]. Accessed February 9, 2015. www.un.org/millenniumgoals.
- United Nations (UN), World Summit on Sustainable Development (WSSD). *Johannesburg Declaration on Sustainable Development*. September 4, 2002, A/CONF.199/20. Accessed May 18, 2015. <http://www.un-documents.net/jburgdec.htm>.
- United Nations Economic Commission for Europe (UNECE), The Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, Aarhus, Denmark, June 25, 1998. Accessed June 9, 2015. <http://www.unece.org/fileadmin/DAM/env/pp/documents/cep43e.pdf>.
- United Nations Organization for Education, Science and Culture (UNESCO), "Man Belongs to the Earth," Unesco's Man and the Biosphere Programme. Fleurus, Belgium: Imprimerie Bietlot

- Frères, UNESCO, 1988. Accessed March 8, 2016. <http://unesdoc.unesco.org/images/0008/000806/080638eo.pdf>.
- UN Economic and Social Commission for Western Asia (ESCWA). *Governance for Sustainable Development in the Arab Region: Institutions and Instruments for Moving Beyond an Environmental Management Culture*. October 23, 2003, E/ESCWA/SDPD/2003/8. Accessed May 7, 2015. <http://css.escwa.org.lb/sdpd/1684/GovEn.pdf>.
- United Nations Framework Convention on Climate Change (UNFCCC). "Marrakech Conference. Information Hub." UNFCCC. Accessed October 19, 2016. <http://newsroom.unfccc.int/cop22marrakechinformationhub/>.
- UN General Assembly, *United Nations Millennium Declaration. Resolution Adopted by the General Assembly*. September 18, 2000, A/RES/55/2. Accessed February 9, 2015. <http://www.un.org/millennium/declaration/ares552e.pdf>.
- _____. *Tehran Declaration on Environment, Religion and Culture*, Annex to the letter dated 9 October 2001 from the Permanent Representative of the Islamic Republic of Iran to the United Nations addressed to the Secretary-General, October 11, 2001, A/56/458. Accessed May 23, 2015. <http://www.un.org/documents/ga/docs/56/a56458.pdf>.
- _____. *Transforming our world: the 2030 Agenda for Sustainable Development. Resolution adopted by the General Assembly*. September 25, 2015, A/RES/70/1. Accessed October 9, 2015. http://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E.
- University of Alberta, "Biology 208 Principles of Ecology Course - Introduction to Ecology". Edmonton, AB, Canada: University of Alberta, Department of Biological Sciences, Winter 2010. Accessed June 4, 2016. http://www.biology.ualberta.ca/courses.hp/bio208/Lecture_Notes_files/Biol208_Lecture2_IntroductionToEcology.pdf.
- Vatican Radio. "Cardinal Turkson: All faiths must work together on ecological crisis," *Vatican Radio*, August 17, 2015. Accessed June 6, 2016. http://en.radiovaticana.va/news/2015/08/17/cardinal_turkson_all_faiths_must_work_together_on_ecology/1165624.
- "Vegetarian Muslim Society's Facebook page." Facebook.com (social media website). Accessed February 9, 2016. https://www.facebook.com/Vegetarian-Muslim-Society-174872052572033/info/?tab=page_info.
- Verde, Tom. "A Tradition of Conservation." *Aramco World* 59, no. 6 (November-December 2008). Accessed December 7, 2015.

- <http://archive.aramcoworld.com/issue/200806/a.tradition.of.conser.vation.htm>.
- Washington Theological Consortium. "Ecology and the Churches. Official Statements and Resources for Study." June 2015. Accessed May 18, 2016. <http://washtheocon.org/wp-content/uploads/2012/12/Ecology-and-the-Churches-2015-FINAL-for-website1.pdf>.
- Wihbey, John. "'Green Muslims', Eco-Islam and Evolving Climate Change Consciousness." *Yale Climate Connections*, April 11, 2012. Accessed May 22, 2015. <http://www.yaleclimateconnections.org/2012/04/green-muslims-eco-islam-and-evolving-climate-change-consciousness/>.
- Wisdom In Nature (WIM) (website). Accessed June 7, 2015. <http://wisdominnature.org/>.
- World Commission on Environment and Development (WCED), "Our Common Future, Chapter 2: Towards Sustainable Development." WCED, 1987. Accessed May 7, 2015. <https://sustainabledevelopment.un.org/milestones/wced>.
- Zaufishan (The eco-Muslim). "Eco-Hijabs on the rise among Muslim fashionistas, interview with Mariam Sobh." *Green Prophet*, January 24, 2011. Accessed February 4, 2015. <http://www.greenprophet.com/2011/01/eco-hijabs-on-rise>.
- Zbidi, Monika. "Tunisia and the Islamic Environmental Movement III/III." *Shaping the Humanities* (blog), July 12, 2013. Accessed May 9, 2015. <http://blog.goethe.de/humanities/archives/14-Tunisia-and-the-Islamic-Environmental-Movement-IIIIII.html>.
- Ziauddin Sardar (website). Accessed May 8, 2016. <http://ziauddinsardar.com/>.
- Zilberman, David, n.d. "Public Goods (Chapter 7)." Power Point Presentation. Accessed June 1, 2015. http://www.ssc.wisc.edu/~scholz/Teaching_441/Chapter7.pdf.

Appendices

Appendix A

Individual semi-structured interviews

Outline

Interview Guide for Activists

Section 1: Sustainability and normative issues

- What does the word “sustainability” mean to you?
- What are the major sustainability problems that concern you the most?
- Briefly describe your vision for a more sustainable planet for this and future generations, and how it ought to be realised.
- What do you think about the remaking of nature by humanity?
- How should humankind take responsibility for and care of the environment?
- How is sustainability related to permaculture/eco-citizenship?

Section 2: Personal “green” history and engagement experience

- What is it like to be an activist concerned with nature?
- Under which circumstances did your ecological conscience emerge?
- What are the main moral, ethical, and spiritual sources of your ecological sensitivity?
- What kind of imagery, experiences, stories or practices have moulded your “green” identity and/or have oriented you towards sustainability advocacy?

Section 3: Social mobilisation and ecological activism

- Why was this initiative taken?

— How did the group take form?

(If right-oriented) In what sense is it correct to define environmental rights as human rights?

(If practice-oriented) How does your group/association contribute to social processes of “green shift”, i.e., long-term transitions toward ecologically-sustainable and socially resilient individuals and communities?

Section 4: Internal and external impact of social action for sustainability

— What social dynamics have you experienced within the group/association over time?

— What role does your group/association play at the local level?

— To what extent and how are your group/association’s foundational values and principles shared by and accessible to popular culture?

Section 5: Justice issues

— Tell me what you think about the supposed relationship between environmental degradation and socio-economic injustices.

— How does ecological awareness contribute to the fight against economic crises, social marginalisation and poverty?

— What have been the social and economic effects of shaping a group/association around regular ecological activities and common responsibilities?

Section 6: Partnerships and networking

— What is your opinion on faith/interfaith-based global sustainability struggles?

- How would you interact with contemporary Islamic-based environmental movements?

Interview Guide for Participants

Section 1: Sustainability and normative issues

- What does the word “sustainability” mean to you?
- Have you ever imagined what a more sustainable planet would look like?
- What are the major sustainability problems that concern you the most?
- What do you think about the remaking of nature by humanity?
- Why should humankind take responsibility for and care of the environment?
- To what extent and how is sustainability related to permaculture/eco-citizenship?

Section 2: Personal “green” history and engagement experience

- What is it like to be a person concerned with nature?
- What are the main moral, ethical, and spiritual sources of your ecological sensitivity?
- What kind of imagery, stories, experiences or practices have oriented you toward sustainability advocacy?
- Why are you taking part in this association?

Section 3: Individual desires and expectations

- What do you personally expect in the long-term from your engagement in such group/association?
- How and to what extent have these sustainability-oriented projects and activities had a major role to play in your “ecological re-awakening”?

Section 4: Ecological activism

- (If right-oriented) Do you consider environmental rights as human rights?
- (If practice-oriented) How does your group/association contribute to social processes of “green shift”, i.e. long-term societal transitions to sustainability?

Section 5: External impact of ecological activism

- Is it possible to disseminate ecologically-friendly attitudes and behaviours among the wider public?
- To what extent has your territory, including your local community, experienced a process of socio-economic and environmental change thanks to the initiatives promoted by this group/association?

Section 6: Justice issues

- To what extent are people’s unsustainable lifestyles unjust?
- How could ecological initiatives help reduce economic and social inequality in Tunisia/Morocco?

Section 7: Partnerships and networking

- Have you ever been engaged with other individuals or groups sharing religious value sets on issues related to sustainability (e.g., Islamic-based environmentalist movements)?
- Would you be disposed either to take part in or collaborate with faith/interfaith-based global sustainability movements?

Appendix B

Focus group discussion

Discussion Guide (excerpt)

Engagement questions:

- What does the word “sustainability” really mean to you?
- Have you ever imagined what a more sustainable planet would look like?

Exploration questions:

- What are the major sustainability problems that concern you the most?
- What do you think about the remaking of nature by humanity?
- Why should humankind take responsibility for and care of the environment?
- To what extent and how is sustainability related to permaculture/eco-citizenship?
- What is it like to be a person concerned with nature?
- What are the main moral, ethical, and spiritual sources of your ecological sensitivity?
- What kind of imagery, stories, experiences or practices have oriented you toward sustainability (advocacy)?
- Why are you taking part in this association?
- What do you personally expect in the long-term from your engagement in such association?
- (If right-oriented) Do you consider environmental rights as human rights?
- (If practice-oriented) How does your group/association contribute to social processes of “green shift”, i.e., long-term societal transitions to sustainability?

- To what extent has your territory, including your local community, experienced a process of socio-economic and environmental change thanks to the initiatives promoted by this group/association?
- To what extent are people's unsustainable lifestyles unjust?
- How could ecological initiatives help reduce economic and social inequality in Tunisia/Morocco?
- Have you ever been engaged with other groups/associations/ sharing religious value sets on issues related to sustainability (e.g., Islamic-based environmentalist movements)? If not, are you willing to achieve such engagement?
- Would you be disposed either to take part in or collaborate with faith/interfaith-based global sustainability movements?

Concluding question:

Of all the things we have discussed today, what would you say are the most important issues to keep in mind?