

# **Transformative Islamic Ecology: A Study of Islamic Ecology in Action**

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**Abstract:** *A growing number of environmental movements recognize the need for a change of our spiritual approach to the environment, while we simultaneously witness a revival and development of ecotheologies and religiously motivated environmental activism. Islamic theological discourse on environmental and ecological questions was dormant for a long time, but in recent decades it has increased. Usually the discussions remain on a theoretical level, and more seldom have we seen these ideas reproduced in religious fatwas or as implemented action. In this article I want to explore how Islamic ecology has been and could be translated into environmental activism and an ecological way of life grounded in Islamic ethics, something which I call a Transformative Islamic Ecology.*

*According to scholars in the field of human ecology and modern scientific ecology, the world is in dire need for radical changes in order to tackle the local and global environmental catastrophes which are already well under way. In order to examine what an up-to-date Islamic response to the ongoing worldwide ecological crises could look like in practice, I studied well-educated Muslim environmental activists and interviewed them on the Islamic beliefs and practices they view as important for their work on the advancement of sustainable agriculture and permaculture. Based on interviews with the seven informants involved in either agroecology or permaculture, this study looks into religious beliefs motivating their activism and how they vision the future of a social movement of Transformative Islamic ecology.*

*The three main topics which emerged during the interviews, can be divided into three dimensions: a) spiritually connecting to nature through contemplation, b) stewardship (khalīfa) as a commitment to learning and recognizing a diversity of knowledges, and c) staging change and striving to create systems free of corruption based on sustainable agriculture, permaculture, an interest-free economy and a diverse civil society. These dimensions could also form the basis for a movement of Transformative Islamic Ecology, which could help in changing theoretical Islamic ecology into practice.*

## 1. INTRODUCTION

Some of the biggest problems currently facing humankind is a various combination of ecological challenges, such as climate change and its scientifically predicted consequences including sea level rise, an increase in natural disasters and global epidemics, large scale loss and extinction of species, a decrease in renewable fresh water resources and a system too fragile to adapt to the rapidly occurring changes (IPCC 2014). Too little has been done to prevent these problems from seriously damaging the possibility of a dignified future for humanity, not to speak about the dignity of the rest of the Earth and its creatures. The reasons for this unfortunate state of affairs are many, such as politicians focusing mainly on short term economic gains and the general public being too caught up in their everyday lives to consider what needs to be done. Meanwhile big corporations are driven by the need for increasing their profit, which of course is directly correlating with the increasing destruction of our common natural resources. The worldwide response to climate change has largely focused on economically profitable alternatives, such as greenwashing the business as usual and developing "green technology" instead of more radical alternatives, such as degrowth and rethinking the economic systems altogether.

Most religious leaders are not even close to realising what role they could play in raising awareness on the moral dimensions of environmental destruction and climate change and very few of them have enough knowledge of modern scientific ecology in order to adjust their religious rulings and advice to the actual conditions we are living in today. Some Muslim theologians, such as Seyyed Hossein Nasr and Ibrahim Özdemir, have done a great deal in developing an Islamic ecotheology based on a deep understanding of modern scientific ecology (Nasr 1996; Özdemir 1998). They have re-examined Islamic teachings in the light of current environmental problems, such as climate change, depletion of the ozone layer, depletion of natural resources, large scale clearing of tropical rainforests, loss of biodiversity, air pollution, water pollution and more (Nasr 1996; Özdemir 1998). The problem remaining is that their theories by and large have remained theories without much influence on the lived reality of Muslims worldwide.

Ecological teachings derived from Islamic sources have to some extent translated into a range of Islamic environmental movements gaining popularity around the world (Islam 2012). Some aim at teaching Islamic ecology among the public, by e.g. advocating for green khutbas (Friday sermons on the environment), some at growing gardens or installing solar panels in relation to mosques, and some develop ecologically sustainable Muslim fashion. There is also a smaller group of Muslims<sup>[1]</sup> who have gone the distance to manifest their Islamic<sup>[2]</sup> beliefs and knowledge of modern scientific ecology into more life changing action. These activists recognize the need for major systemic changes in order to face the contemporary ecological crisis and they work as environmental activist, ecological farmers, permaculture trainers and teachers in order to develop ecologically sustainable livelihoods based on sustainable agricultural practices. The work they do is also driven by their Islamic faith and Quranic and prophetic teachings, which they combine with other sciences. The number of individuals engaged in this form of conscious activism is still relatively small, but the number seems to be growing, as the internet and social media provide a possibility for these activists to connect, communicate and spread these practices worldwide. I refer to this type of activism as transformative Islamic ecology in order to emphasize that this approach recognizes a need for a more radical transformation of the current ecological systems than most

other initiatives within the larger Islamic environmental movement. The term transformative also includes the meaning of a change in substance and character into something quite new and possibly better.

In this article I have chosen to highlight the beliefs and practices of this very specific group of Muslims, who aim to transform both the physical as well as the mental relations of humans to their environment. They might not be concentrated to a single area or united by a common religious school of thought, but what they share is an awareness of modern scientific ecology and concrete actions Muslims could engage in in order to combat, as well as adjust to, the environmental and ecological disasters lying ahead of us. My research questions were as follows:

- How do Muslims working for sustainable agriculture or permaculture relate Islamic beliefs and practices to their environmental engagement and activism?
- How do they view the future of a social movement of transformative Islamic ecology?

After this introduction I introduce my theoretical framework and then present a short literature review of three fields closely related to my study, namely studies on religious beliefs and environmentalism, Islamic ecotheology and Islamic environmental activism, which help to situate my study within and between these discourses. I then describe the methodology I used and introduce the informants. In the analysis I discuss the three main themes which emerged during the interviews: 1) a spiritual dimension, which connects people emotionally to nature through contemplation and internalizing the Islamic concepts of unity, diversity and balance, 2) a knowledge dimension, which means accepting stewardship (khalifa) as a commitment to learning a diversity of knowledges, and 3) an action dimension, which indicates the importance of staging change by creating food and economic systems based on Islamic principles and a diverse set of knowledges, such as permaculture design. In the end I discuss my findings and present my conclusions.

## **2. FRAMEWORK OF THE STUDY**

This study of transformative Islamic ecology combines fields such as Islamic ecotheology, political ecology, behavioral sciences and social sciences. My studies in human ecology, also known as environmental social science or human-environment interactions research, have taught me to cross all disciplinary borders when studying human-environmental relations (Moran 2010). The human ecological approach could also be described as postdisciplinary studies, which Sayer states that come into being when “scholars forget about disciplines and whether ideas can be identified with any particular one; they identify with learning rather than with disciplines” (Sayer 1999, 5). Another important aspect of studies in human ecology is exploring how humans perceive themselves and interact with their environments (Bates and Tucker 2010, 8).

### **2.1. Theoretical Framework**

Alienation from nature has been identified as one of the main causes of the global ecological crisis and different spiritual philosophies of nature aim at countering and reversing that development (Gardner, Gerald & Stern 2002). In my research I look at which aspects of Islamic beliefs and practices can counteract this alienation. I also analyze the Islamic beliefs and practices discussed in this study as a form of political ecology, an approach which recognizes the inherent links between the political, ecological and cultural (Escobar 2006).

### **2.1.1. Alienation from Nature**

Several philosophers have developed theories on the spiritual roots of the ecological crisis and how it is based in a spiritual alienation of humans from nature (White 1967; Nasr 1996; Plumwood 2002). However, our religious and spiritual worldviews, which largely form our human-environmental relations, have been identified as possibly both the cause of and a possible solution for the crisis (White 1967; Nasr 1996).

Probably the best known writer who has argued that religions are the root to our current environmental problems, is Lynn White, who in his famous essay "Historical Roots of Our Ecologic Crisis" says that it was the Western form of Christianity which made humans God's image on Earth and let them dominate the rest of creation. He argued that the root of the ecological crises lies in biblical anthropocentrism and a dualistic view on human-nature relations (White 1967). He was not saying that the religious groups now would in any way be worse than others, but that this general idea for centuries had influenced the whole Western world, which has now entered a "post-Christian age". White's ideas can be compared to Max Weber, who in a similar manner argued that Protestantism is a direct cause of capitalism. Others claim that the anthropocentrism and exploitation of nature for our needs is in fact not a Judeo-Christian heritage, but an ancient Greek one (Calliot 1983 as cited in Gardner, Gerald & Stern 2002, 37).

René Descartes is often seen as the main philosopher who contributed to the development of a dualism of substances, that mind and body are essentially different. This dualism has then expanded to distance humans from nature as a whole. Val Plumwood has criticized the concept of dualism and dualistic thinking and considers it as a cause for destructive behavior towards the environment (Plumwood 2002). According to the human/nature dualism, the essential characteristic of humans is a "radically separated reason", which situates humans outside and above an inferior nature (Plumwood 2002, 4). She claims that rationalism, as in "a cult of reason", in combination with a human/nature dualism are particularly characteristic for the contemporary Western cultures (Plumwood 2002, 4).

Seyyed Hossein Nasr also discusses the historical roots of dualism and religion's important role in bringing back the spiritual unity with creation (Chittick 2007). Also my informant were well aware of the concepts of dualism and alienation from nature and therefore counteracting alienation from nature became a recurrent theme throughout the research.

### **2.1.2. Islamic Political Ecology**

In the article "Difference and Conflict in the Struggle Over Natural Resources: A political ecology framework" Arturo Escobar describes a framework for political ecology, where he puts cultural distribution on the same level of importance as economic and ecological distribution (Escobar 2006). When I analyze Islamic activism for sustainable agriculture and permaculture, this notion of cultural distribution becomes a critical factor. While the activists I interview first and foremost seem to orient their activism against the ecologically unsustainable practices of the global capitalist society, they also direct a critique against the secularity of the major part of the environmental movement, by using religious rhetoric and the connected religious practices. Another political dimension which can be seen is the intra-religious political struggle, where a re-reading of religious texts from a contemporary perspective can contribute to intra-religious debate.

In Najma Mohamed's PhD dissertation on an eco-justice ethic in Islamic environmental education she constructs a research framework called liberation ecotheology, by combining theories of

political ecology with liberation theology. Liberation theology she defines as linking the belief in God directly to actions for political, socioeconomic and environmental change (Mohamed 2012). However, liberation theology is a concept imported from a Christian tradition and is thus considered by many to be irrelevant or simply unnecessary in Islam. Islam and Christianity share many commonalities as Abrahamic world religions, but one of the most essential differences is the lack of all the hierarchical structures of bishops, priests and Churches in Sunni Islam (Chambers 2006, 40). The Islamic principle that authority should only be temporary and based on competence accords well with the anarchist notion of 'rational' authority (ibid.). 'Rational' types of authority such as in a teacher-student relation, does not necessarily imply any kind of domination, as long as authority is based on competence and remains temporary. The way Muslims establish mosques by local funding and appointing teachers of their own choice is as an organizational structure very similar to anarchist organizations (ibid.).

For many Muslims Islam has little in common with the organizational structures of the Church and therefore many Muslims see no need for "liberation" from religious authorities, as that freedom is seen as God-given. It has been claimed that Islam in itself is a theology of liberation or as Tariq Ramadan put it "Islam is liberation" (Ramadan 2014). In this study I study the activism of my informants through a lens of Islamic political ecology, which I define as Islamically motivated political-ecological struggles against hegemonic knowledges and practices.

## **2.2. Religious Beliefs and Environmentalism**

Religions develop human relations to the environment mainly by emotionally involving people to their surroundings or by sanctioning certain conversational behavior (Anderson 1996, 167). Studies on how people's religious affiliations and beliefs are related to their concern for the environment have produced some conflicting results (Gardner, Gerald & Stern 2002, 38). Some recent studies show that people with strong religious practices could be more prone to change their behavior to protect the environment (Gardner, Gerald & Stern 2002). Adherence to religion was measured in two ways: 1) religiosity, as in frequencies of praying and self-reported strength of affiliation and 2) level of fundamentalism, as in how literal the readings of holy scriptures were. It turned out that when these two aspects of religiosity were separated, the level of religiosity seemed to have positive effects on environmental attitudes (Gardner, Gerald & Stern 2002, 43).

Another way is to study the relation of religions and environmentalism is to look at societies which are relatively ecologically sustainable. Eugene Anderson is a cultural anthropologist, who has studied different ways in which people manage their natural environment. In his book "Ecologies of the Heart" he gives examples of cultures around the world, where religiously motivated beliefs have had a positive impact on resource management and conservation (Anderson 1996).

It has been shown that religion can be an effective tool in advancing sustainable resource management strategies and the efficiency of this approach is according to Anderson largely based on the fact that religions and similar cultural systems serve primarily to offer "a moral code by embedding it in an emotionally compelling communal system of symbols, beliefs, and ceremonies." (Anderson 1996, 162).

While experts and scientists seem overly concerned about objectivity, rationality and dispassionate examination, Anderson argues that there is a need for genuine love for the environment and an emotional engagement with it (Anderson 1996). Anderson notes that many field biologists love their study subjects, but in public they are afraid to admit this, as no emotions are allowed to appear in

their writings (ibid.). Powerful emotions are, however, recognized as a major force behind environmental political action. Anderson also recognizes the notable role of religion in politics.

”Politics without rationality soon degenerates into mindless conflict. Reason without passion carries no political appeal. Politics thus comes to rely on wider and more personally compelling belief systems. Religion is notable among these.” (Anderson 1996, 160)

Anderson’s main strategies to bring emotion into the environmental discourse is by bringing people into the natural environment and let them love it, which will make them act to protect that which they love (Anderson 1996). What the environmental movement needs is openness to all visions and philosophies with ecological morals and it must not appeal only to fear, but to love as well (Anderson 1996). As a response to the lack of spiritual approaches to nature in the West, many young environmental movements have included religious or spiritual elements, such as the deep ecology movement (Anderson 1996; Gardner, Gerald & Stern 2002).

Most pollution and environmental destruction is, however caused by corporations and governments, and not individual behavior (Gardner, Gerald & Stern 2002, 7). Changing the behavior of individuals could therefore be an ineffective way of tackling environmental problems, as most of the destruction would still continue. Why individual’s beliefs and behavior do matter is the possible effects of collective action and influencing government policies and corporations (Gardner, Gerald & Stern 2002, 7). An argument which also encourages a further look into religions and environmentalism is that value change is said not to occur in whole populations, but in smaller groups of people sharing similar characteristics such as age and experience (Gardner, Gerald & Stern 2002, 66).

Ethical discussions found in philosophical works do generally little to motivate people to follow these moral guidelines, so according to Anderson (1996) most people will follow some type of ordinary contemporary social morality, which is largely constructed upon earlier religious and philosophical teachings. These social morals, however, are limited to the field of daily influence and do not have the same authority, originality or inspiration as religious leaders, who have come with a much more persuasive and comprehensible rhetoric and a set of ethical codes appealing to human emotion (Anderson 1996, 161). More studies are needed to say anything profound about the relation between religious adherence and environmental attitudes, and so far all major studies have focused on adherents to Western Judeo-Christian religions, which can hardly be said to be representative of any other religion or region.

### **2.2.1. Religious Environmental Activism**

Whereas religion in many societies still is a major force in involving emotion in moral codes, religion and faith never ceased to influence people in the so called “post-secular” societies in the West (Norris & Inglehart 2004). Religion continues to flourish and in many circles it is being revived as a source of ecological worldviews. Many religious leaders are also becoming more environmentally aware and have started to encourage pro-environmental behavior (Gardner, Gerald & Stern 2002). According to Anderson (1996, 168) the modern and Western world is “not so much a secular world cut off from ”Nature” as a deeply ambiguous, divided, and contested world”.

According to Gardner, Gerald and Stern (2002) religiously based environmental movements usually share a worldview (or system of beliefs) consonant with modern scientific ecology (see table 1 page 7) and an ecocentric value orientation. Pro-environmental organizations with an ecocentric value

orientation may often take the same actions as anthropocentric environmentalists, but based on different ethics (Gardner, Gerald & Stern 2002, 58). Anthropocentric environmental organizations would e.g. oppose environmental pollution first and foremost because of the risk to human well-being.

**Table 1: Western and Modern Scientific Ecological Worldviews**

(Adapted from Gardner, Gerald & Stern 2002, Table 3-4, p. 53 and Table 3-6, p. 57)

Dominant Western Paradigm	Modern Scientific Ecology
Dominance over nature	Complex, interdependent and interconnected life-support systems. Human survival depending on vulnerable ecological processes.
Natural environment as a resource for human use	Ecological integrity and diversity must be maintained
Material/economic growth for a growing human population	Permanently sustainable levels of population, resources use and, and pollution must be reached
Belief in ample resource reserves	Earth's supply of natural resources is limited
High technological progress and solutions	Managing nature with technology can lead to failure, as the complexity of systems is too hard to comprehend
Consumerism	"Upstream" solutions, such as limiting material use, are more beneficial than "downstream" solution, such as recycling

Followers of the main world religions have generally welcomed modernity and industrialization, by either adapting their teachings to fit that development or by neglecting the environmental teachings found in their religions and traditions. Only some smaller groups, such as the Amish communities in North America, have remained extremely faithful to their old way of life. During the recent decades all the big world religions have also recognized the need to emphasize and develop their theological, moral and ethical principles that support respect for the environment, their ecotheologies (Nasr 1996; Gardner, Gerald & Stern 2002; Townsend 2009).

The notion of stewardship, that is human responsibility to respect and care for the sacred creation of God, its ecosystems and nonhuman forms of life, is a well-studied concept, which is thought to encourage pro-environmental behavior among Christians and Jews (Whitney 1993 in Gardner, Gerald & Stern 2002, 49). The ecotheologians argue that the concept of stewardship is deeply

rooted in the Bible, but that Christendom has deviated from these scriptures in recent centuries, because of suggested causes such as the Protestant Reformation, the Enlightenment and the industrial revolution (Gardner, Gerald & Stern 2002, 50). When searching for solutions to the ecological crisis by using religious appeal it should, however, be based on actual experience of what works in practice. Anderson (1996, 169) suggests that such initiatives should be based on experience from societies that have successfully managed their resources, and not on purely emotional belief, which “could be a formula for disaster”.

### **2.3. Islamic Ecotheology**

Muslims around the world are now looking for religious answers to the environmental crises and solutions for it (Gilliat-Ray & Bryant 2011). Generally societies in areas with a high pressure on natural resources have developed more conservational traditions than where resources have been abundant (Anderson 1996, 168). If this theory holds true then Islam, which developed on the Arabian Peninsula in the 7th century should have plenty of conservational traditions and many scholars who have studied Islamic ecology would agree with this claim. Although there is a tradition of environmental teachings in Islam, it was not until the awakening to the ecological crisis in the 1970s that the environmental aspects of Islam were brought back into wider discussion by some Islamic scholars. At that time the Muslim ecotheologian Seyyed Hossein Nasr began advocating for a more up-to-date Islamic ecotheology, which recognizes the modern circumstances and a modern scientific ecological worldview. Some other scholars who have raised critical questions concerning an Islamic view of the environment are Mawil Izzi Dien, Ibrahim Özdemir, Hamza Yusuf and Fazlun M. Khalid.

The Islamic eco-theological work is largely based on studies of the Quran in combination with teachings derived from the life of Prophet Muhammad. In the Quran the earth is mentioned hundreds of times and a basic understanding of the physical world and humanity's role in it is pictured. Prophet Muhammad also provided plenty of environmental advice and is known for e.g. having established natural reserves and forbidden the destruction of trees in battle (Ramadan 2007).

Additional sources may include texts on Islamic ethics and Islamic philosophy, as well as traditional Islamic jurisprudence developed throughout history to deal with management of the environment (Nasr 2003). In the texts of Islamic philosophy it is the Sufi texts which contain most expressions of an Islamic "metaphysics and theology of nature" (Nasr 2003, 94). Looking at historical sources, Nasr also considers Islamic art, such as architecture, landscaping and urban design, as an embodiment of the Islamic sciences and literature, especially poetry, as a source of spiritual teachings.

According to Nasr, religion plays a crucial role in the solution of the existing crisis between man and nature (Nasr 1996). Like many other scholars Nasr argues that the environmental crisis is tied to the spiritual crisis in the world. The environmental crisis is merely an external sign of a crisis within us and therefore the crisis cannot be solved without the removal of this inner crisis (ibid.). Nasr claims that it is modern secularized sciences, the removal of their ethical and social aspects and the negation of other understandings of reality which leads to a reduced understanding of the world (ibid.).

Tariq Ramadan calls the ecology taught by Prophet Muhammad a type of “upstream ecology”, meaning that it is not springing from “the anticipation of disasters” of human actions, but an ecology for preventing disasters (Ramadan 2007, 202). To show this he retells a hadith about



Prophet Muhammad telling a man performing ablution "Why such waste, O Sad?" and Sad asked if one can waste in performing ritual ablutions. "Yes, even when using the water of a running stream" answered the Prophet (ibid.). This hadith indicates that even when an action has no apparent negative consequences for the environment it is not recommended that you consume more than you absolutely need.

Among the different ecological worldviews, the Islamic one can be understood as everything from a very anthropocentric one, where environmental ethics are based on the wellbeing of humankind at the expense of all other life forms, to a much more ecocentric worldview where all creation is seen as Muslim and therefore in need of similar rights as humans. Most of the works of Islamic ecotheologians highlight the importance of central Islamic ethical principles and concepts, such as *tawhīd* (divine oneness), *khalīfa* (vicegerency or stewardship) and *mizān* (balance) in the formation of an Islamic ecological worldview (Khalid & O'Brien 1992). In order to keep my introduction to Islamic ecotheology limited I will give a brief overview of a few central concepts in Islamic ecotheology and their references in the Quran and the sunnah.

- **Creation as Muslim**

In the Quran the Earth can speak (99:4), ants and birds talk (27:17-22) and everything in the heavens and earth praise God: "The seven heavens declare His glory and the earth (too), and those who are in them; and there is not a single thing but glorifies Him with His praise, but you do not understand their glorification." (Quran 17:44 Shakir) According to the Quran everything is created for a purpose and everything follows the laws of Nature, which are the laws of God. This implies that all of creation, organic as well inorganic, is Muslim, meaning they are in submission to God (Khalid 2002). The earth was created for all living things, not only humans (Quran 55:10) and the Quran also mentions the animals as being divided into communities like humans: "There is not an animal (that lives) on the 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." (Quran 6:38 Yusuf Ali).

- **Unity and Balance**

A central concept in Islam is *tawhīd*, oneness or unity. Allah is one and the belief in his unity is *tawhid*. His unity is also reflected in the unity of humanity and nature (Mahasneh 2003). Nasr has argued that the dualism of human/nature is foreign to his understanding of Islam, and that the Muslim world has been influenced by the dualism coming from the West. He argues that centrality of the concept *tawhid* makes the dualism of human/nature impossible in Islam (Nasr 1996). The unity is also seen in the interdependence of all creation. The world functions only because it follows a preordained pattern and is set in a balance, *mizān*. Man then has a responsibility to use his God-given reason and knowledge to not transgress the balance (Mahasneh 2003).

"The sun and the moon [move] by precise calculation, And the stars and trees prostrate. And the heaven He raised and imposed the balance That you not transgress within the balance." (Quran 55:5-8 Sahih International)

- **Fitra- Primordial Nature of Man**

In Islamic ecotheology, the concept of *fiṭrah* is the pure state, a state of intrinsic goodness and principle which describes the primordial nature of creation. This means that everything in creation has a potential for goodness and that humans can consciously choose to express this natural pattern

in which they were created (Khalid 2002). Fitra is considered to be the natural state of man in harmony with nature and as an idea it is compatible with the argument that people must “return” to a more natural way of living as proposed by environmentalists.

“So direct your face toward the religion, inclining to truth. [Adhere to] the fitrah of Allah upon which He has created [all] people. No change should there be in the creation of Allah.” (Quran 30:30 Sahih International)

- **Stewardship**

According to the Quran humans were given the role of caretakers of the earth (2:30-34; 6:165). Stewardship is a central concept for environmental ethics in all Abrahamic religions and has been in the center of their ecotheology and interreligious dialogue on the environment (Assisi declarations 1986; Gardner, Gerald & Stern 2002). The Arabic word used is *khalīfa* and it can be translated into English as vicegerent, guardian, trustee or caretaker of the earth. The term is closely related to the concept of *amānah*, trust, which has been handed to humanity (Quran 33:72). According to Muslim ecotheologists the role of stewardship is what separates humans from other creatures on Earth, as humans accepted this responsibility offered to them by God. In the Quran it says:

“We did indeed offer the Trust to the Heavens and the Earth and the Mountains; but they refused to undertake it, being afraid thereof: but man undertook it;- He was indeed unjust and foolish” (Quran 33:72 Yusuf Ali)

When humanity accepted the *amānah* and the role as *khalīfa*, they made a contract with God, which means they will be held accountable for all their deeds on the Day of Judgment and they affect their status in the *ākhirah*, the hereafter. This responsibility has been translated into practical directions for how to live, sharia law, which includes environmental law, animal protection, forest conservation etc. The trusteeship is not ownership and the relation could be seen more as that of a just ruler with his subjects. Having power his subjects, does not give the ruler freedom to do as he wishes with them, but he has to treat the subjects according to the contract he has with the owner (Hussain 1991).

- **Signs in Nature**

In addition, Özdemir regards nature as a ‘sacred book’ or a ‘book of the universe’ (Özdemir 1998). The word *‘āyah* can refer to a verse in the Quran and as well as a natural phenomenon or a wonder of nature. This can be interpreted to mean that the Quranic verses from God are a wonder of nature, and that each wonder of nature is a verse from God (Özdemir 1998). The *ayahs* of God’s creation are mentioned many times in the Quran as messages for humanity to contemplate and reflecting on in order to get to know God and Islam:

“And Allah has sent down water from the cloud and therewith given life to the earth after its death; most surely there is a sign in this for a people who would listen. And most surely there is a lesson for you in the cattle; We give you to drink of what is in their bellies-- from betwixt the feces and the blood-- pure milk, easy and agreeable to swallow for those who drink. And of the fruits of the palms and the grapes-- you obtain from them intoxication and goodly provision; most surely there is a sign in this for a people who ponder. And your Lord revealed to the bee saying: Make hives in the mountains and in the trees and in what they build: Then eat of all the fruits and walk in the ways of your Lord submissively. There comes forth from within it a beverage of many colours, in which

there is healing for men; most surely there is a sign in this for a people who reflect.” (Quran 16:65-69 Shakir)

- **Benefits of Agriculture**

According to sheikh Ahmad Kuftaro (1990), the late grand mufti of Syria, Islam pays great attention to agriculture and practicing it is considered a kind of worship. In an article published on his website Kuftaro cites many hadiths in support of this claim. The farmer is e.g. said to have a bigger right to own the land he cultivates than anyone else, as the hadith goes: "He who cultivates land that does not belong to anybody is more rightful (to own it)" (al-Bukhari(a) 2335). Anyone who farms is also rewarded spiritually for whatever benefits the plantation produces: "Whoever reclaims and cultivates dry, barren land will be rewarded by God for the act. So long as men and animals benefit from it He will record it for him as almsgiving" (al-Munawi as quoted in Özdemir 1998). Planting a tree can also be understood as charity, even if the harvest is stolen or eaten by birds as the following hadith states:

"If a Muslim plants a tree, that part of its produce consumed by men will be as almsgiving for him. Any fruit stolen from the tree will also be as almsgiving for him. That which the birds eat will also be as almsgiving for him. Any of its produce which people may eat thus diminishing it, will be as almsgiving for the Muslims who planted it" (al-Bukhari as quoted in Özdemir 1998).

## **2.4. Islamic Environmental Activism**

The relevance of the Muslim population in the world is increasingly growing. Almost one in four people on earth are Muslims and 60% of them are under 30 years old (Pew Research 2011). Muslim consumers spend around \$2.3tr on halāl food and lifestyle sectors such as fashion, cosmetics, entertainment, tourism and education and their power as consumers make many companies turn to Islamic marketing to make profit of their Muslim identities (The Guardian 2014). Among the top ten countries in the world with the highest greenhouse gas emissions per capita in 2010, six countries were Muslim countries, with Qatar in the lead, followed by Kuwait, Brunei, Oman, UAE and Bahrain (World Bank 2014). One of the aims of the general Islamic environmental movement is to turn Muslims away from excessive consumption habits, which are seen as a result of the Enlightenment and the materialistic conception of nature that followed (Saniotis 2012).

Most of the research on Islamic ecology has been of a theological type, with only a few empirical studies on Islamic environmental practices, such as environmental activism among Muslim groups in the UK (DeHanas 2009; Gilliat-Ray & Bryant 2011; Chowdhury 2013), an Islamic approach for environmental conservation in Indonesia (Mangunjaya & McKay 2012) and Islamic environmentalism in Turkey (Ignatow 2008). As far as I know, only one PhD dissertation by Eleanor Finnegan has previously examined a similar type of Islamic activism for sustainable agriculture which I focus on, but with the difference that she focused her study on activism in the USA (Finnegan 2011).

The Islamic environmental movement is as diverse and as global as the environmental movement in general. Most of the most prominent Islamic environmental initiatives today could be classified as working for "weak sustainability", as these initiatives focus on individual consumption patterns or green consumerism, such as in switching to biofuel for the cars, stopping bottled water purchases, using renewable energy in the mosques or marketing ecologically produced fairtrade Muslim fashion. These initiatives generally do not attempt to change the global socioeconomic systems,

which are the main cause for environmental degradation. In this research I focus on a smaller group of activists who try to advance a more radical understanding of Islamic ecology and are familiar with modern scientific ecology, recognizing the inherent faults in our current systems and attempting to create new sustainable economic and ecological systems through transformative activism.

When I refer to Islamic activism I mean activism “rooted in a literature that mixes social criticism, moral admonition, and philosophical dictums, all of which draw on Islamic textual sources” (Hashem 2006, 23). These sources are then reinterpreted to fit the specific context and concrete circumstances in which the activism takes place. Hashem (2006) outlines two main dimensions of Islamic activism: 1) the sharia dimension, which tries to understand Islam's socio-religious teachings and 2) the activism dimension, where these interpretations take the form of various types of physical activities. The movement I study seems to be mostly based on an eclectic type of sharia interpretations and this will become apparent in the analysis, where I look at how the importance of a diversity of knowledges is emphasized by some of my informants (Table 2, p. 12).

Quite literal interpretations of hadiths and Quranic quotes are used extensively in the Islamic environmental movement to increase care for the environment among Muslims, but generally they lack up-to-date contextual interpretations. The eclectic sharia interpretations takes also other than Islamic sources seriously, and when including sources of modern scientific ecology in their readings, it leads to an Islamic ecotheology which recognize the inherent faults in our contemporary global systems and the need for more radical changes. Table 2 shows one way to classify the diversity of approaches to the environment in Islam. In this article I am interested in exploring transformative Islamic Ecology, based in a mainly eclectic theological approach as described by my informants.

**Table 2: Islamic environmental activism**

	Weak Islamic environmentalism	Transformative Islamic Ecology
Theological approach	Traditional and literalist theology of the Environment without including knowledge of modern scientific ecology	Eclectic, contextual and contemporary theological approach including knowledge of modern scientific ecology
Examples of activism	Green consumerism Picking up trash Wasting less water Avoiding pollution	Transformative activism Staging change Creating ethical systems Ecovillages Permaculture

#### **2.4.1. Permaculture and Islam**

Muslims involved in permaculture provide a good example of the type of activism I call transformative Islamic ecology. Including permaculture teachings into their religious worldview

exemplifies the eclectic, contextual and contemporary theological approach, which also includes modern scientific ecology. "As the world's problems are growing ever more complicated, the solutions remain embarrassingly simple" is a saying of Bill Mollison, also known as the father of permaculture. The word permaculture was first used by Bill Mollison and David Holmgren in the middle of the 1970s to describe "an integrated, evolving system of perennial or self-perpetuating plant and animal species useful to man" (Holmgren 2002, 3). During the years the concept has developed and can now better be explained as "(c)onsciously designed landscapes which mimic the patterns and relationships found in nature, while yielding an abundance of food, fibre and energy for provision of local needs." (Holmgren 2002, 3) Even though a lot of focus is put on developing a permanent and sustainable agricultural system, permaculture also applies to people, buildings and organization.

There are three overarching ethics in Permaculture that guide the design process:

- Care for the earth (husband soil, forests and water)
- Care for people (look after self, kin and community)
- Fair share (set limits to consumption and reproduction, and redistribute surplus). (Holmgren 2002, 7)

Permaculture teachings vary locally, as each ecosystem require its special knowledges. The worldwide permaculture network works to spread permaculture design solutions by creating generally local changes, but they also influence the surrounding societies by advancing organic agriculture, appropriate technology and intentional community design (Holmgren 2002, 4). People involved in permaculture have generally completed certified Permaculture Design courses (PDC), which are organized all over the world (Holmgren 2002, 4). Five of my seven informants were certified Permaculture designers or trainers.

The relation between Islam and permaculture has been discussed on web pages and internet forums and the interest for permaculture among Muslims seems to be growing quickly (McCausland 2014; Facebook group Muslims for Permaculture and Sustainable Agriculture). Several Muslims are arguing that there is a strong link between Islamic teachings and permaculture ethics and principles and applying permaculture teachings is not only seen as an obligation for Muslims to fulfill their responsibility of being caretakers on earth and feeding humanity, but also as a necessity to enable an Islamic way of life (Kent 2012; McCausland 2014; Galluzzo 2014). Islamic Sufi thought has often been emphasized by Muslim permaculture designers, such as in the UK based organization called Wisdom In Nature (WIN), which offers courses on themes such as 'Permaculture and Sufism' and 'Islamic ecology' (WIN 2014).

Cooperation between Islamic educational institutes and the permaculture network is currently taking place in e.g. Zaytuna College in Berkeley, California and in Dar al-Mustafa in Tarim, Yemen, where a permaculture site is under development (PRI Tarim 2014). Another type of cooperation is established between the Permaculture Research Institute and Muslim Aid Australia, with the intention to exchange resources and knowledge to advance goals shared by both organization (The Permaculture Research Institute 2008).

### **3. METHODOLOGY**

The departure point for my interviews lies in phenomenology, as I aim to describe the life world of the informants. Phenomenology implies "an interest in understanding social phenomena from the

actors' own perspectives" (Kvale & Brinkmann 2009, 26). This encompasses the assumption that what really matters is the reality as people perceive it. By taking an approach of phenomenology of religion, I am not seeking to explain causalities between certain beliefs and observable phenomena, but my aim is to interpret the religious beliefs, disclose the meaning of them and understand how they are perceived and experienced from the perspective of the religious subject (Blum 2012, 1030). My perspective could also be called constructivist, as I emphasize the construction of knowledge and identities.

As my approach to religion is phenomenology of religion and not theological, I am not taking a stand on whether or not the beliefs are true or reasonable or as Blum puts it "[t]he phenomenologist does not ask whether God exists or what he/she is like, or whether or not scripture actually represents the divinely revealed will of God" (Blum 2012, 1031). Interpreting religion from the perspective of religious consciousness and experience means trying to understand how the religious subjects regard certain phenomena and what the meaning and significance of such phenomena are for the subjects (Blum 2012, 1031).

My approach is also based on a rejection of objective knowledge. Feyerabend rejected the existence of objective knowledge production on the notion that all observations are theory dependent, creating a certain perspective (Chalmers 2003, 140-149). This ultimately boils down to the fact that there is no need to consider so called scientific claims superior to other forms of knowledges, such as religious knowledge. This can also be called a form of relativism, as it "underscores the relativity and indeed the equality of all knowledge claims" (Brante 2001).

### **3.1. Qualitative Interviews**

By conducting qualitative interviews I aimed to develop an understanding of the informants' point of views and their experience of how their Islamic beliefs can be related to their activism. I also wanted to know how the informants view the future possibilities of their work and an islamically motivated movement for sustainable agriculture. Semi-structured interviews provided a suitable format as they do not allow for standardization or straight forward comparability, but they allow the informants to express their views to a larger extent on their own terms (May 2001, 123). Equipped with a set of questions I had some main topics I wanted to discuss, but the order of the topics discussed varied according to the interview. From time to time my informants would take a lead on the subject, which new topics emerged which I could otherwise have missed.

My study is not tied to a specific geographical area, as this movement or set of ideas is truly global. In total I interviewed seven individuals from four different continents, all representing quite diverse views and but sharing a Muslim identity and a belief that their work for sustainable agriculture and permaculture is part of their faith. One interview was made in person and the rest were conducted on Skype. All interviews were recorded and after transcribing them I searched for common themes and structures as well as contradicting ideas among the different interviews.

One question I had to ask myself was the possible consequences of the interviews on my informants. As I am an environmentally concerned Muslim myself, I quite easily could relate to the informants and gain their trust, but in every interview situation there is a power asymmetry between the researcher and the informant (Kvale & Brinkmann 2009, 18). Even though many of my informants allowed me to use their real names in the study I chose to give all of them pseudonyms, in order to keep the focus on the content of what they say, rather than the individuals themselves.

### 3.2. The Informants

When I looked for informants my aim was to find people engaged in transformative environmental activism, and holding a conviction that the current global environment is developing in a negative direction and that Muslims have a religious responsibility to try to change that course of development and build a more sustainable society. I looked for Islamic environmental initiatives on various forums, webpages, blogs and facebook, where I could find email addresses and facebook profiles allowing me to contact the activists. I decided to focus my study on Muslim environmental activists who are somehow working with sustainable agriculture, either permaculture or agroecology, because I argue that most of these environmental activists have a different understanding of ecology and the global ecological crises, than the ones working with initiatives closer to green consumerism. Apart from contacting activist I found online and through contacts I also contacted a couple of people who I knew personally and fitted the targeted group.

Of the informants, one was in his twenties, three were in their 30s, two in their 40s and one was over 60. They were residents of Ethiopia, Egypt, the UK, the US, Australia, the Netherlands and Sweden. Five of them can be described as converts to Islam, as they had been growing up in a non-Islamic or non-religious environment. Five of the informants have had an education in permaculture and most of them also practice it in their daily lives and teach it to others. Of the other ones, one is educated in agroecology, one in geography and one is a science teacher. What unites all the informants education-wise is a deep and up-to-date understanding of modern scientific ecology.

At least four of the informants have started up different environmental organisations or movements and four were engaged in local permaculture activities in their communities. Some of the activist have been working extensively on the convergence of Islam and ecology, whereas some have kept these thoughts more private, partly for reasons such as aversion to religion in their work environment.

Although my sample of seven informants all call themselves Muslims and engage in somewhat similar activism, their religious views naturally differ greatly from each other. Because they all have very diverse backgrounds and are geographically distributed around the world, my results should be understood as examples, which cannot be generalized to any particular group of people. As I cannot make any context specific analysis of the interviews, I focus on drawing up bigger lines and themes in my analysis of the content.

#### Notes

[1] The many denominations, local and individual varieties of Islam could be argued to make the term Islam meaningless, but in this article I define Islam as the personal religious convictions of people identifying themselves as Muslims. The aspects of Islam which unite most Muslims are the Quran, the sunnah, the five pillars of Islam and the six pillars of faith.

[2] The difference between the words Islamic and Muslim is that Muslim refers to a human being adhering to the Islamic faith, but not everything he or she does is Islamic. Muslim can also be used to refer to purely secular or cultural aspects of human life. When I use the term Islamic, I want to distinguish between self-reported faith-based actions and other actions done by a Muslim but not in the name of Islam.

## 4. ANALYSIS

All informants shared a strong faith in that Islam can teach humanity a lot about environmental ethics and sound ecological practices. "It is very clearly stipulated in the Quran what our role is here and how we are supposed to tread carefully on this earth and not destroy this earth. It is our home", said Hossam. Most of the time I did not need to ask the questions in my interview guide, as the informants themselves initiated the discussions I was interested in. All of the informants saw their work with environmental activism as linked to their faith in many levels. Hossam expressed how his Muslim identity encompassed all his activism, which made any other names subordinate: "I wouldn't even say that I am an ecologist, I wouldn't say that I'm an environmentalist, I wouldn't say I'm a permaculturist, I wouldn't say I'm a farmer. I would say I am a Muslim, because Islam kind of covers all of these things. I would say I am all of them and I am all of them because I am Muslim".

### 4.1. Beliefs and Practices for a Transformative Islamic Ecology

In order to limit and structure my analysis I decided to focus on three main dimensions of religious practice which were discussed during the interviews; namely A) developing a spiritual connection to nature, B) recognizing a diversity of knowledges and learning as a requirement for a conscious stewardship, and C) practical activism, which my informants saw as a form of religious practice of serving God. These themes can be seen as corresponding to three commonly mentioned dimensions of Islam; spirituality, knowledge and physical submission, which in turn correspond to the human dimensions of 1) heart and soul, 2) mind and 3) body. Nezar described the different types of civil society activism he does in these terms: "We give information, so that is for the head, to put it like that, but when we walk in nature, that is also for the heart. And when people get used to organize their lives in that way it will all come together."

The first dimension is the most personal, as it concerns spirituality and the personal connection to the divine. To the second dimension belongs that which requires using reason, aql, like recognizing that humans have been given a special morally and legally binding role on earth. Learning about God's message to humanity in combination with other knowledges is a requirement for the third dimension, which is the necessity to act upon the received knowledge. All informants stressed one of two of these dimensions more than others, but when I analyzed the interviews as a whole, the three dimensions emerged as equally important.

#### A. Developing a Spiritual Connection to Nature

A theme which emerged in most of the interviews was the importance of developing a personal relation to nature and creation through studying the signs Allah has put forth for humanity to contemplate over. Corresponding well to Özdemir's theories on the signs of nature, many of the informants saw a parallel between how they study the Quran and how they study the creation as signs from God (Özdemir 1998). As all of my informants have first-hand experience of some forms of agriculture, and they have spent a lot of time working the soil, studying how different plants and ecosystems function. Through contemplation and personally engaging with nature several informants claimed to have strengthened their connection to God and developed a more profound understanding of the vast diversity within the unity of all creation. Studying nature also helped them see creation as an abundant gift from God set out in a fragile balance, which humanity should try to understand, maintain and facilitate. For Hossam studying the Quran and Islam brought him closer to nature:



”It was only when I came to Islam that I realized the importance and beauty of the nature. However, I've always been a science geek, so I've always found the actual chemistry and science behind nature amazing. I've always been in awe of it. And for me, the closest thing to seeing God on this earth is nature. Because when I look at nature, when I am around nature, when I look at the complexity and the beauty of His creation, that is when I am closest to Him. Not when I am in the mosque [laughter]. Only when I am in the garden and when I see fruits and flowers and vegetables coming out of the ground, out of this dirt that we stand on.”

- **Contemplating the Signs**

Contemplation over the signs in the Quran in combination with the signs of nature can from a religious point of view be seen as a strife to reach a state of fitra and taqwa, which can be defined as a god-consciousness where one is aware of God and all his attributes. This strife I understand as a part of a constant personal struggle, jihad, in order to combat the natural human inclination to become alienated from one's own nature, fitra, and the environment. Interestingly enough the first of twelve permaculture principles is called “observe and interact”, not at all that different from the Islamic concept of contemplation (Holmgren 2002, 9).

Khadija reverted to Islam shortly after starting to volunteer on farms. She calls working on the fields alone and weeding a kind of meditative practice which helped her on her journey to find God. Here Khadija talks about a “newborn state of mind” which could be understood as fitra:

”So I spent a lot of time outdoors on that farm, you know, planting and contemplating, and at the same time I was learning about Islam, so I was reading Quran. So I was really in this kind of newborn state of mind, where everything was new and I was newly discovering or rediscovering things in a much more pure kind of way. So, you know, I really connected to Allah, subhānahu wa ta'āla[1], while I was out there. And that really helped me to come into Islam.”

Ahmed in Sweden was also explicit in stating that caring for the environment is something spiritual for him and that working in the outdoors is healing him. Nezar explained how his relationship to the environment was always connected to his faith: “From the very beginning there was a combination of religion and environment, because I experience nature and taking care of the earth as part of your spiritual development“. He also referred to Islamic sources, according to which mountains and non-organic matter also have life:

“In prophetic teaching everything has a life, has a spiritual life, even a rock has a life. So we should respect the whole of creation. From that consciousness everything starts“.

- **Characteristics of Nature**

How I understood my informants was that by contemplating over and studying nature one can try to understand the characteristics of nature and ecology and then internalize these. This way one can reach one's natural state of fitra, uniting with the rest of creation, which is not capable of the type of alienation humans experience. Some of the main characteristics of nature mentioned by the informants were interconnectedness, which I consider to be part of tawhid, diversity and the balance of this diversity, mizan. Many of these characteristics of nature are also corresponding to permaculture principles, such as “integrate rather than segregate” and “use and value diversity” (Holmgren 2002). References to the diversity of plants can also be found in the Quran (20:53 Yusuf Ali): "With it have We produced diverse pairs of plants each separate from the others." In the Quran it is also mentioned that creation is abundant and full of useful blessings for humanity: “Eat and

drink from the provision of Allah, and do not commit abuse on the earth, spreading corruption” (Quran 2:60 Yusuf Ali). Internalizing these values can help Muslims fulfill the role of being responsible caretakers of the Earth and then enjoy the great abundance of blessing that God has created.

Working the soil helps in understanding the diversity and interdependence of everything in nature according to Khadija:

”Some scholars say that being out in the desert and seeing the stars and the universe out in the desert is so awe inspiring because you feel so connected. All of a sudden you are like, 'wow, this is the vast universe that Allah, *subhānahu wa ta'āla*, created' and I feel the same way about the earth, when you really connect to what's happening, how these plants are growing and how they are all so different and they all have their needs, but they all connect with like this net of mycelium underground and the soil is... You know we came from the soil, we were created from clay, we were created from the earth and our whole nutrition and basis of health comes from the soil so I think it is our responsibility, as Muslims to know that and to take care of our bodies.”

Here she also connects the belief in that human were created from soil to the fact that everything we eat is dependent on the soil and the nutrients in it. This is where the unity of creation becomes apparent and this is a concept more widely studied in Sufism. During the interviews many mentioned Sufi scholars, such as Hamza Yusuf, Habib Umar bin Hafiz and Jalal ad-Din Rumi, as being influential to the Islamic environmental movement. Sufism should not be understood as a separate sect in Islam, but as a philosophy relevant to most Islamic schools of thought.

According to David there is a connection between accepting the diversity of creation and simplifying your own life.

“It [Creation] is constantly evolving and we have to accept that and if we do accept that, then we are simplifying our lives and accepting an infinite and eternal path. [...] There is a point when you realize that you are quite comfortable with infinity, because there is an infinite set of evolutions that can happen when you facilitate creative events. You are only facilitating them, you are not creating them. Cause you're not the Creator.”

Khadija described how she understands that the role of being stewards means to respect the nature, but also “to cultivate it in such a way that it will become more, instead of less. And that it will also serve human kind in a sustainable way.” When I asked about the importance of biodiversity Ahmed explained that it was crucial in order for the balance not to be disturbed: “Cultivating just monoculture and without biodiversity affects the natural balance. I believe in biodiversity in everything”.

For most of the informants it was clear that humanity has transgressed the natural balance set by God (Quran 55:7-8). Hossam said: “And if you look now it is very clear that we have transgressed that balance, which is why we are having climate change and you know ice caps melting and hurricanes and the weather is getting worse.”

## **B. Commitment to Learning Diversity of Knowledge**

The second dimension of Islamic beliefs and practices which was discussed with all of my informants related to the concept of *khalīfa* or stewardship. Stewardship is one of the most commonly discussed topics when it comes to ecotheology both in Christianity and Islam, as

mentioned earlier. However, the way my informants talked about stewardship differed a bit from most Islamic ecotheology on the theme. I found that some informants found the concept a bit problematic and preferred to talk about caring for the earth using different terms.

First of all Hossam emphasized that stewardship by definition means that you do not own and cannot use creation for your own interest only. He says that the role of stewards means have a responsibility to look after something which is not ours, as God is the ultimate owner of everything between heavens and earth according to the Quran.

“He [Allah] says 'to him belongs whatever is in the heavens and the earth and all obey his will. And it is he who originates creation'. And that implies that everything on earth, whether or not it has any use to mankind has a function, has a purpose, so we cannot destroy something that we find is not useful to us. Cause it is not ours.”

When I asked the others about the meaning or importance of *khalīfa*, some were reluctant to answer or answered indirectly. I think this reluctance had to do with their more ecocentric worldview and the concept of stewardship has, maybe especially in English, a very anthropocentric nuance to it. What appeared during my interviews was the need to put extra emphasis on how the *khalīfa* has to be accepted with a great humility, as humanity's knowledge about the world or how to manage it is never complete. This is how the discussion with David went:

- Me: Are we guardians, or?

- David: We are students.

- Me: Yes, there seems to be many risks with using this concept.

- David: Because you don't necessarily accept change.

Here David is probably referring to the twelfth permaculture principle “Creatively use and respond to change”, which teaches how change can be beneficial both in agriculture as well as societies and organizations (Holmgren 2002). Perhaps the concept stewardship is too often understood as a monotonous job which humanity has to do, instead of seeing it as processes of endless change and diversity.

Muslims believe humanity have been given a special role on this Earth because of their ability to learn and reason, *aql*. The first word revealed to the Prophet was *iqra'* (Quran 96:1), read and accepting the message of Islam can be understood as a commitment to learning about how to act right and fulfill the role of stewardship on earth. The stewardship can also be seen as a legally binding contract between humanity and God, which humanity is accountable for on the Day of Judgment. Khadija retold story about Adam and what made his role on earth different:

“Adam was created on this Earth after everything else was created, after Allah *subhānahu wa ta'āla*, created everything else. He was then created and he was taught what every single one of those things were. I mean, we learn that in the Quran [2:30-33]. He was given the names to all living things. And why was he given those names? Because he has that responsibility of knowing something and you can't appreciate and respect something without knowing it, you know without identifying what it is. So I think that's where we have to learn about what is in our immediate environment.”

She further explained the problem of people not being able to identify even the most common trees in their environment: “So if you don't know that it is an oak tree or you don't know it's a maple tree

or you don't know it's a pine tree, how are you going to respect it and give it its due rights? Because in Islam we have to give creation its due rights”.

Hossam also emphasized the imperative of learning in Islam by referring to the first verses which were revealed to Prophet Muhammad (Quran 96:1-5):

“In the Quran, the very first command was what? Iqra’. And the word iqra’ doesn't mean ”read this”. [...] There is another word which means read this, but he doesn't say that. He says iqra’, which means read, in general. He has given us something called aql, which is reasoning, and we're supposed to go and find other sources of knowledge, not just the Quran. The only reason the Muslims were at the forefront of discoveries and science and poetry and literature during the golden age of Islam was because of this. The Muslims were translating Greek texts and you know the Greek religion was paganism and shirk in its highest form, yet we understood that these people regardless of their religion were educated people, so we translated their texts. It is promoted and advocated in Islam to go out and learn from other sources.”

So according to these statements what is required from humanity in order to fulfill the role of khalīfa is a commitment to learning and studying nature and all kinds of knowledges which could bring an increased understanding of nature and guidance to act right. Khadija related the alienation from nature and detached from our environment to how people are nowadays more like residents than inhabitants:

“And we are in such a move all the time in this world now. Before people grew up in one place and they stayed there. They may have traveled a bit, but they knew their landscape, they knew their environment and it is this concept of inhabitation, you inhabit that space, whereas now we are like residents. We are actually moving so much we don't know our watershed, we don't know what grows around us, we don't know how to grow anything.”

- **Diversity of Knowledge**

The commitment to learning and studying a wide variety of subjects in order to deepen the religious understanding of the environment and our role in it also necessitates a questioning of authorities, in whatever form they come; religious or secular. It is here that the relation to Islam as freedom plays in. Another way to express it could be that my informants expressed an intellectual courage in the way the hegemonic traditions were questioned, both when it came to environmental aspects as well as religious ones. Perhaps these traits of intellectual courage and rejection of sectarianism could also be something especially common among Muslim reverts and Western Muslims.

Nezar explained one reason for his reversion to Islam was the dislike of institutions in religion, such as the Church represented.

“So my search for knowledge on the environment and my search for knowledge on spirituality and religion were parallel and slowly but surely I got more attracted by Islam, because I was interested in, I say, a more meditative way of dealing with religion and at the same time I was very... Well, I didn't feel comfortable with organizations, so that put me off when people are talking about the Church and things like that.”

Khadija also mentioned how she did not learn most of her religion, or deen, from Muslims but by just reading Quran and establishing a relationship with Allah while being outside in nature. Hossam grew up in a Muslim family in the UK, but he says it was not a religious environment. He mentions this aspect as something which benefited him in his understanding of ecology:

“But a few years back I came back to Islam... I came back and I kind of spent, most people they grow up in mosques and around other Muslims and I think it was kind of fortunate that I didn't do that because this kind of thinking, thinking about the environment, thinking about the ecology as a whole, is not very prevalent amongst Muslims. And I kind of spent a year or two, kind of by myself learning about the deen and Islam and then when I looked at the society and I looked at Muslims I kind of found that there's a dichotomy between what Islam was teaching and what Muslims were practicing. And I think most people who are reverts to Islam find that as well.”

He then goes on to talk about his own generations of European Muslims, who he claims have rejected the traditional version of Islam and all kind of sectarianism in search for the true Islam by going back to the Quran and the sunnah and asking the question “what is this book actually really telling us to do”. He said:

“So you have a group of Muslims that have emerged, that are wanting to practice the true Islam, not the Islam of their parents or their forefathers, but go back to the real Islam and make Islam not just their religion, but their whole way of life. And through that they have also realized, and then combined with the environmental crises that we are having at the moment on earth, they kind of made the connections. They've connected the dots together and they found that in fact Islam is an almost, I hate to use the word hippie movement, (laughter) but the hippie movement is very close to it. And they found that the Prophet, *ṣalla Allāhu ‘alay-hi wa-sallam*[\[2\]](#), was an environmentalist or an ecologist himself.”

The informants again emphasized the importance of diversity, but this time concerning knowledges. The diversity in of all life can also be seen in the diversity of human communities and peoples, as mentioned in the Qur'anic verse: “O mankind! We created you from a single (pair) of a male and a female, and made you into nations and tribes, that ye may know each other” (49:13). Having a diverse ummah is also seen as a strength from an ecological point of view:

“Me: How important is it for you that in Islam you don't have to belong to any institution to be a Muslim? And that you are free to define your beliefs?”

Nezar: I think it is important for the whole of the ummah, for its very survival and its credibility. So in that way... Actually you can compare it to agriculture. In modern industrial agriculture you have monocultures and those monocultures they make the agricultural system very vulnerable, very prone to diseases and things like that. Even with genetic engineering and things like that. When one disease pops up it can destroy a whole harvest. You can compare that to the Muslim ummah. When the ummah is diverse and when they celebrate it, that the ummah is diverse, it is better equipped to counter all challenges and threats. So even when people differ in opinion, differ in approach, that is something we should be very happy about.”

- **End of Days and Ecological Collapse**

For many of the informants Islam holds the answers for most contemporary crises. The ecological crisis is interpreted as mentioned in the Quran and a direct result the corruption which humanity has spread on earth: “Corruption has appeared throughout the land and sea by [reason of] what the hands of people have earned so He may let them taste part of [the consequence of] what they have done that perhaps they will return [to righteousness]” (Quran 30:41 Sahih International). Hossam quotes this verse and then explains it like this:

“So what that means is that... there's a concept in Islam called fasaad, which is corruption, so if corruption is rife, there will be signs that the earth will give us because of what the hands of men have done. And these signs that we are getting, like the destruction of our soil, like the destruction of our food systems, animal welfare and climate change. These are signs so that we can reflect on them and find our way back to mizan.”

One topic which emerged especially in the interviews with Hossam and Farouq was the importance of eschatology, the religious teachings about end of days. The discourses on the ecological crisis and preparation for societal collapse share terminology, beliefs and suggested actions with Islamic eschatology. The ecological, economic, political and climate crisis are interpreted by many Muslims as a sign that we have entered or are entering the end of times. Understanding the Islamic eschatology requires knowledge about our current global processes and an understanding of the interdependence of all these processes. Because these topics are not promoted in most societies, finding the information is a counter hegemonic struggle in itself.

In order to prepare for the end of days, there are some suggested ways in which Muslims can minimize their role in the destruction of the earth, as well prepare themselves for the hard times lying ahead. This corresponds pretty well with what the permaculture and transition town movements are teaching. Farouq mentioned the hadith saying: "There will come a time when the best property of a Muslim will be sheep which he will take to the tops of mountains and the places of rainfall so as to flee with his religion from the afflictions" (al-Bukhari(b) 7088). When I asked him which the afflictions are he answered:

“Farouq: The destruction of the world, war, oppression, etc. Loss of morality, pollution, greed. Society has become perverted.

Me: So the destruction is kind of approaching and now it's time to pack and leave?

Farouq: No it's already happening all around us, look at the middle east, Syria, Egypt, Iraq, etc. Look at climate change, pollution, deforestation etc. Look at the instability of the financial system.”

Hossam mentioned the same hadith and added:

”And you kind of think ‘What, how will that happen?’. And it will probably be because we will have to start over, because this system in which we currently are living in is designed to crash. This crisis that we're.. this is not a crisis, this is a collapse. It has been designed to collapse.”

For Nezar Islam was also always linked to the global issues and not just the standard “talk about adaab (manners) and sharia” as he expressed it. He wanted to relate Islam in a deeper way to what he learned in academia and “the bigger issues, both personal and also global”. Khadija expressed frustration over that the environmental issues seemed to appeal mostly to revert Muslims. She said the immigrant community in her town is just not as interested. Omar, who has been living most of his life in Egypt tried to explain why the kind of discourse which works in the West might not have the same effect in less developed countries:

“whenever someone wants to spread permaculture, whether when it started 40 years ago in Australia or now, he hammers on the same concepts that Bill Mollison has started, which is ‘We are saving ourselves from disaster’ and also the transition cities movement ‘We are protecting ourselves, so whenever the crisis happen, we'll be safe.’ And actually it never happened. And they predicted that it will happen so long ago and it didn't happen at the time when they predicted.”

Omar thinks most people in Arab countries are less interested in preparing for crises, as they usually do not make long-term plans and instead deal with the crises when they occur. In the interviews with my informants there appeared to be a difference of opinion or approach between Western ideas of creating change and the everyday realities in which a big part of the world's Muslims live. Connecting the dots and criticizing the current ecology of the world systems is still a privilege of some sort. I will come back to this discussion in the section on challenges of a movement of transformative Islamic ecology.

### **C. Staging Change and Establishing New Practices**

The third dimension which I focus on relates to how activism and staging the change was seen as a relevant part of the informants' understanding of Islam. After gaining spiritual wisdom by studying the signs in the Quran and nature and having studied all forms of knowledges which the stewardship requires, a Muslim is then required to act upon the gained knowledge. Nezar mentioned the necessity for Muslims to act according to their knowledge in relation to the environmental classes he gives:

“Nezar: Sometimes I also say, when we have a lecture, that actually giving them all that environmental knowledge is very mean to do, because they will be reckoned on the day of judgment based on their knowledge, so if their knowledge is increased, their responsibilities increase also.

Me: But then you have fulfilled some of your responsibilities, which is spreading information.

Nezar: That's true. [laughter]”

Some informants stressed the necessity to start the change from within and by being an example yourself. When I asked Ahmed about how he understands khalīfa and if he finds it important, he answered that the starting point of khalīfa is to spread good, love and peace around you, both with regards to the environment and people. Only by feeling at peace inside can your actions become a reflection of the inner peace. Nezar also stressed that the change starts from within: “We approach it (environmental education) in, what you can call, a holistic way, so you cannot change your manners when you don't change your inner self. And the other way around also. So we consider that an Islamic concept”. Ahmed believes big changes can happen if individuals change themselves and become examples which others will want to follow. Setting an example is more effective than talking and teaching: “You know, if I do something in front of you and you see it. That can affect you.”

What are then the practical ways of staging change which my informants believe are inherently a part of their faith? How can the systems be made more Islamic? How are Muslims supposed to live in a corrupted world? Establishing permaculture demonstration sites is one way to stage change and starting an interest-free currency could be another. Emigration away from the current societies and their systems, hijra, offers Muslims another possible way to liberate themselves from the existing systems and build a society on their own terms and with their own values.

- **Creating Halal and Tayyib Food Systems and Economies**

There are many aspects of Islam which can be seen to encourage the establishment of permaculture practices and a sustainable food system based on organic local agriculture. According to my informants Allah has commanded people to eat the food that is halal, permissible, and tayyib, which

means it is wholesome, healthy and nutritious. This has many implications for how Muslims live in societies where the food system is not based on these principles. Some of my informants argued that the best way for Muslims to make their food system halal and tayyib is by becoming completely self-sustaining on organically produced food and meat. Khadija thought striving for self-sufficiency should be a goal for Muslim communities everywhere:

“I think one of the first things is for Muslim communities, whether that's a Muslim country or a small community within a country, but to become more self-sufficient. And to be able to, again looking at those closed loops, be able to provide everything you need for that community right there. And it can be done. We have seen these amazing projects in the desert, like the greening the desert projects, where this can be done.”

Khadija was stressing the importance of eating healthy food. She hoped for broader discussions in society on which foods can be considered good and pure and how Muslims should relate to genetically modified foods etc. Meat production is another topic which was discussed with many, as it demonstrates how the Islamic concepts, such as halal slaughter, can evolve to mean something completely different than the original meaning. Khadija explained that “Halal is more than just bismillah and cutting the throat. Halal is how it is raised, and what it is raised on and where it is raised.”

Nezar has personally been active in advocating for Muslim and Jewish communities right to continue ritual slaughter in the Netherlands. For him the concept of producing meat in Islam is a solution to the large scale, industrial, efficient and money driven system of producing meat in the West. Even though Nezar in his activism often cooperates with non-religious environmental organizations, in this particular case he thought that the advocates of the environment and animal welfare were cooperating with bioindustries: “It was obvious for us to see that the mechanic way of slaughtering was just to increase productivity and not meant for a better animal welfare.”

As mentioned in the hadith earlier, production animals will also be the most valuable a Muslim can own when the end of times arrive. Cultivating the land was also seen as an activity which needs to go on until the end of times. Many quoted the hadith stating: “If you have a sapling, if you have the time, be certain to plant it, even if Doomsday starts to break forth.” (al-Munawi, Fayd al-Qadir, iii, 30. as quoted in Özdemir 1998). About the end of times David said:

”You can plant a tree or plant as many as you can. That is what we are told to do. If you think you are going to die today, then one of the good things you can do is plant a tree. And you get extra credits for those trees that perform functions for any other living thing.”

Nezar also emphasised how to act based on hope even if end of times are approaching:

“But as a geographer I always say there are differences in the level of analysis. So there's the personal level, and the societal and global level. So on a global level we can say there are prophecies saying that at the end of times people are living in big cities and the rest is desert. But that doesn't mean that we need to be passive, because at the same time we need to deal with our own day of judgment. That way we always must show that we have acted based on hope and not based on despair. And that actually everything is in the hands of Allah, *subhānahu wa ta'āla.*”

Hossam believes Muslims should respond to the current social and ecological crises by follow the examples of Prophet Muhammad, Prophet Lut, and Prophet Ibrahim who all made hijra, emigrated, from a corrupt society to start anew in a better place. Some Muslims also believe they should leave corrupt societies and construct ecovillages, intentional communities or Muslim villages. The



concept of Muslim village has been developed and explained by the scholar Imran N. Hosein, whose teachings Hossam follows and recommend:

“We're living in a Godless society, so he [Imran Hosein] says that it is time for us to now, for Muslims to preserve our faith and to establish Islam, because you cannot practice Islam in its entirety unless you have the Islamic system.”

Just like a food system based on other principles than the halal and tayyib causes humans to sin by harming themselves as well as the nature and animals involved, the interest based economy causes a similar negative loop. Hossam explained how “(e)very single pound, all currency currently, is created based on usury and we can't escape it”. Riba is the word used for usury or interest in Islamic terms and it is considered a big sin. This notion makes every exchange made with these interest based currencies a sinful act which should be avoided. In order for Muslims to avoid riba they will need to create their own interest free currencies. Hossam explains:

”The ultimate goal of the Muslim village would be to have complete self-sufficiency and to not trade with money. So the money that we are going to be using is going to revert back to the dirham and the dinar, gold and silver.”

Focusing on the concept of hijra does not necessarily mean that one has to leave society completely. A website, which Hossam has established with a friend, is directed to Muslims who want to perform hijra, but it also invites “people who maybe don't want to leave the city or maybe are not ready to do that, but still want to practice a level of self-sufficiency in their house.” Also Khadija emphasized that pulling yourself out of the corrupted systems does not mean you have to join a cult:

“It is really clear that this is the best way for us to live and it is the best way for us to connect to our Lord, you know, it is by living in this kind of way and to pull ourselves out of this materialistic... I mean not completely, you know, not so that we are some weird cult and we're going off the grid. But you know small measures, small things at a time.”

- **Permaculture**

As most of the informants were involved in permaculture, the relationship between permaculture and Islam was widely discussed. When I asked why so many activists link permaculture to Islam, Omar explained that the connection is quite strong, as permaculture teaches us how to go back and live according to nature and Islam is about the natural way of living. Permaculture fits quite well into Islam according to Farouq: “Permaculture is about designing your life and the things around you to support your needs. It fits with Islam as a lifestyle choice - way of living - and it also fits ethically with Islamic values” David further explained how permaculture ethics link to Islamic ethics:

“If you care for the environment you also care for the people. And by caring for the people you care for the environment. And the third ethic is the return of surplus, which is like a zakah, which is accepted in the Islamic world. You return your surplus back to the caring for the people and the caring for the environment.”

Omar also considered the life of Prophet Muhammad and his companions as a perfect model of permaculture. David said the community of Prophet Muhammad in Medina was “more or less like the first ecovillage in the way it operated”. David explained the relation between Islam as a religion and permaculture design this way:

”Permaculture fits into Islam as it does in much religions, if not all religions. The religions themselves don't fit into permaculture. So, Islam doesn't fit into permaculture, but permaculture fits into Islam, very easily. [...] Because permaculture is separate, it is a science, a design science, an ethical design science, but it is not a belief system. You don't have to believe in permaculture, permaculture is provable. You can measure it.”

Practicing permaculture, creating a self-sufficient food system, an interest-free economy or performing hijra to a Muslim ecovillage are not only seen as ways to avoid harming nature and contributing to corruption, but also as a way to eat and live more healthy and more in accordance with Islamic principles. Living in a clean environment is also something which can bring you closer to God. Like Hossam stated earlier it is in the nature he connects to his God and Khadija also said that “we need to be in an environment that makes us want to pray”. Without this third dimension on establishing new practices, the spiritual dimension which requires physically connecting to nature, becomes much harder to realize. The dimensions of spirituality and the third dimension of staging change are thus codependent and become part of the same development.

Ahmed who has been working as an agricultural inspector visiting both conventional and ecological farms thinks there is a difference in the general atmosphere, that people are less stressed on organic farms and that there is general feeling of harmony on them: ”Having a lifestyle as an organic farmer is reflected in the character and to the surrounding. So social aspects are a part of it. It is not only the environment.”

#### **4.2. Visioning a movement of Transformative Islamic Ecology**

Most of the informants recognized that in the future there is a need for work on many levels. Like the analysis of the beliefs and practices relevant for a transformative Islamic ecology is divided into three main dimensions, possibilities of building a social movement for a transformative Islamic ecology can also be divided into these three dimensions: 1) spiritually connecting to nature, 2) combining a variety of knowledges, developing ecotheology and Islamic environmental legislation for a holistic environmental education in mosques and madrasas, and 3) practically developing and building sustainable alternative systems such as ecovillages and permaculture demonstration sites. The different methods of change proposed by my informants are gathered in table 3.

These dimensions are not to be seen as separate, but they are all mutually reinforcing each other and one without the other does not lead to a transformative Islamic ecology. These dimensions also correspond to the different methods shared by large parts of the environmental movement, so a wide cooperation between both religious and non-religious initiatives is possible and this aspect all my informants also recognized as important. Hossam said:

“I think there's a huge potential [for the movement to grow] because it is not something that has spurn from our own ideas. It is very much prevalent in the Quran and in the sunnah. It is just a forgotten part of Islam and to revive that has been made easier because of the amount of reference to it in the Quran and in the sunnah. So to wake up the people to the importance of it, it is difficult, because it is not widely taught, but it has been made easier because of the references to it in the Quran.”

Many of the informants work in various cooperation with Islamic scholars and community leaders with an interest in the environment. Some of the scholars belong to a so called “traditional” school of Islamic scholarship, such as Habib Umar in Yemen, have also embraced permaculture as an

Islamic way to meet the current challenges and has invited people to teach permaculture design courses in Dar al-Mustafa, the renowned Islamic school in Tarim which he has established. None of the interviewees saw their work as resistance to Islamic scholarly authorities, but more as a struggle to build alliances with them, as their influence on Muslims was recognized as vital for the movement to spread on a larger scale.

Khadija expressed a will to see more examples of how this change can be realized in practice. She mentions the project “Greening the Desert” in Jordan as a perfect model of permaculture in a dry area and continues by talking about the potentials of permaculture in Tarim:

“I think maybe Tarim is a better example once they really build that out, you know that's a spiritual center where a lot of people go and that has a lot of potential for exposing a lot of people to something that most likely is brand new to them, you know, permaculture and what this looks like and how to live in a community that is dependent on Allah’s bounty, completely dependent on what Allah provides and not what somebody else is processing and manufacturing and sending to you.”

Nezar even stated that if majority of Islamic scholars start supporting permaculture, then all Muslims would eventually have to accept it:

”Well Hamza Yusuf and people like that in California are very strong supporters (of the union between Islam and permaculture), as they can see all the links. And once you point it out to Islamic people, and it is rather obvious, then it has to be accepted.”

For young Muslims in the West Hossam thinks the movement is attractive because of the alternative it provides in a time of crises:

“I think another reason is also that Islam provides an alternative way of life at a time where we have the peak oil crises, we have climate change, the economy is crashing. A time when people are seeking an alternative way, a different way, Muslims, specifically these Muslims (young Muslims in the West), are finding that, Islam is actually answering all of these issues that we have currently on earth and they find that it is providing a solution which is why they are so vocal and active about it.”

Omar, again talking from the perspective of the big majority of Muslims in the developing world, was of the opinion that what really makes a difference is teaching people practical skills, instead of trying to change their whole mindset: "If you tell a farmer that you have to be good to the environment and so on, but you don’t give him the practical skills how to do so, so it is not very effective." So spreading the skills and practices which automatically makes you good to the environment, even without knowing, is the way he believes change can happen.

**Table 3: Proposed ways to create change**

Spiritual dimension	<ul style="list-style-type: none"> <li>- Contemplating on nature</li> <li>- Gardening or working in agriculture</li> <li>- Activities in nature</li> </ul>
Educational and knowledge dimension	- Involving more Islamic scholars and imams

	<ul style="list-style-type: none"> <li>- Teaching in madrasas and Islamic schools</li> <li>- Using diverse knowledges, scientific and traditional</li> <li>- Online networking and sharing resources</li> </ul>
Practical activism and staging change	<ul style="list-style-type: none"> <li>- Establishing Muslim ecovillages</li> <li>- Teaching farmers worldwide</li> <li>- Urban farming</li> <li>- Becoming self-sufficient</li> <li>- Creating interest-free currencies</li> <li>- “Heroic activism” (Greenpeace style)</li> </ul>

One of the challenges is how to spread permaculture widely, when people are still dependent on national currencies in order to survive living in their societies. It was especially Ahmed and Farouq who emphasized this, as their projects in Egypt and Ethiopia face the harsh realities. There is a need to present poor people with an economically realistic alternative for our current world. Ahmed said: “If I think about Egypt and this project that I told you, that I want to change the agricultural system in Egypt. When I was in Egypt I could feel it will not be easy. And I feel like ‘How am I going to succeed with this?’ People they want money, they want to survive.” Farouq has been working with permaculture projects in Ethiopia for seven years. He is now moving on from the first site to a new project in another area. He claims that a demonstration site will never be successful if it is not economically sustainable:

“Originally I was idealistic. I wanted to establish a movement in the local people. However a westerner may not understand their needs and thinking so easily. Now I am seeking to establish a strong financial base in this new project. People in Ethiopia want money. [...] With strong independent financial base we hope to work to protect environment and culture of the people in our area. Ethiopia has amazing ecological resources, but people are too poor to consider their worth... saving ecology has to be shown to be profitable.”

He now wants to work with permaculture models, which could be both sustainable and profitable. He says Ethiopia needs a way to use its environmental resources to promote development without destroying them and critiques parts of the permaculture movement as being post-industrial movement of middle class westerners who wants to "go back to the land", which suits only a certain society and a certain situation.

The bulk of discussions on the future of the movement were however fairly positive. Nezar said he wished that Muslims would become more heroic and do the kind of activism Greenpeace does. Most of my informants expressed a great enthusiasm over the possibilities for a social movement combining Islamic environmentalism with permaculture and similar ecological movements. Khadija

said: “I really think Muslims could be at the lead of this, you know. There are other religious groups that are trying to do this, but not on a large scale, so I'd love to see... You know, I just think we can do so much more.” David had no doubt about how the movement of permaculture and Islam will eventually change the world:

“It can't do anything but change the world. [...] I just think that it is something that we shouldn't doubt. That it is not only possible but also endlessly expandable. And right at this point in history we have no real way of understanding how far it can go and how abundant the world can be, from its present position to what the potential is.”

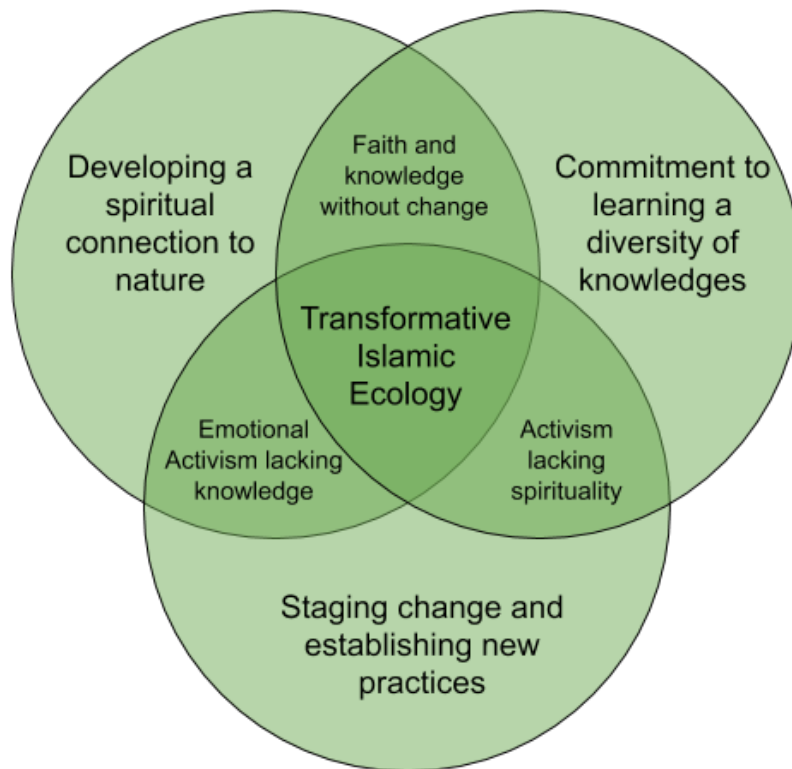
## 5. DISCUSSION

As all of my informants have first-hand experience of agroecology or permaculture, they have spent a lot of time working the soil, studying how different plants and ecosystems function. By spending a significant amount of time studying these signs of creation, my informants have gained different types of knowledges and other perspectives than the ecotheologians focusing mostly on the traditional Islamic textual sources, without themselves engaging in the environment with that level of intensity.

Looking back at my first research question “How do Muslims working for sustainable agriculture or permaculture relate Islamic beliefs and practices to their environmental engagement and activism?”, I can say that for most of my informants the links between their Islamic beliefs and work were so many and so strong, that it would be quite impossible to separate specific beliefs and practices, as they all are interconnected. David mentioned that people's discipline can be of a big advantage for the movement and even that can be considered something Islamic, so there is no end to the possibilities of positive links between Islam and advancing sustainable agriculture and sustainable societies. In order to analyze the mentioned beliefs and practices I divided them into three codependent dimensions of religion, which I illustrated in the diagram 1.

In the diagram I summarized the main findings and show how the different beliefs and practices can be organized into three interconnected spheres which together can create a field of transformative Islamic ecology. If one of the dimensions is missing the result will be something different than the transformative Islamic ecology my research is focused on. If e.g. the dimension of “staging change and establishing new practices” is missing the spheres of spirituality and knowledges will not create any change in physical realities. Because there would be no physical change also the spheres of spirituality and knowledges would weaken by time, as the practical sphere reinforce both of these spheres. Khadija mentioned earlier that Muslims should create and reside in environments that “makes us want to pray” and Muhammad talked about the positive energy and peace which he sensed on organic farms. Creating those spaces and communities which allows for spirituality and diverse learning is what seemed to be imperative for a transformative Islamic ecology.

**Diagram 1: Three dimensions of transformative Islamic ecology**



In case the spiritual dimension was missing, the activism could very well go astray, as it would mean action and knowledge without including the heart and the personal attachment to nature. In the worst case it could end up as the type of "rationalism" Plumwood (2002) has criticized or action based on the secularist sciences, which Nasr warned against (1996). Khadija's reasoning around the difference of being a resident or inhabitant of your area also connects to this point. Inhabiting indicates a more emotional attachment to the area than residing, which could mean activities in your immediate surrounding are more spiritually rooted than activities in an unfamiliar environment.

Many risks can also be associated with the case of practical activism which is guided by spirituality and emotion, but lacking the proper or suitable knowledge. Anderson (1996) was warning against this type of religious environmental activism and in all of my interviews knowledge as a necessity for action was apparent. The current corruption of our ecological systems was understood as being mostly a result of the lack of diverse, interconnected and holistic knowledges on Islam, ecology, economy as well as practical skills. A critique of going with the flow, following the normative or hegemonic knowledges in both religion and ecology, was also present in all interviews.

My second research question concerned the future of a social movement of transformative Islamic ecology. Throughout the discussions plenty of critical questions were raised in relation to who the movement is for and how to make the movement spread among farmers in poorer Muslim countries. Although this movement is a counter hegemony movement in many ways, it also has to be said that it is currently led mostly by Muslims in a privileged position. Being in a privileged position of

course has plenty advantages, such as possibilities to network with organizations, institutions and leaders, as well as financially sponsor projects and courses for less privileged people. However, in order for the movement to spread widely and make an impact on people's lives, and this was mentioned by many of my informants, there is a need to get even the illiterate farmers in the countryside in the developing world involved and engaged in the movement. There also seemed to be a concern that the type of beliefs which influence western people might not have the same relevance for a person from a different background or living under different circumstances.

## 6. CONCLUSION

What became very apparent is that according to my informants Islam is a religion of spirituality, learning and actions and the way Muslims approach the environment should ideally happen on all these levels. The results of my study are a reflection on Islamic ecotheology by informants who actively promote these teachings in their lives and combine this knowledge with their knowledge on modern scientific ecology. Among these activist working with Islam and ecology in practice there seemed to be a slightly different focus on topics considered central to Islamic ecotheology, such as the definition of stewardship.

My informants came with ideas of how the complexity of nature could be understood, internalized, accepted as well as facilitated by Muslims and when this is done correctly the natural balance, which is mentioned in the Quran, will demonstrate its abundance. Keeping the balance from the perspective of my informants is understood as so complex that humans can only try to understand it and here the imperative to search for knowledge comes in. A requirement to fulfill the role of stewardship was a commitment to lifelong learning and also studying sources which contradict the current normative and hegemonic knowledges. Stewardship was seen as a task which should be accepted with a great the humility and it should start with knowing yourself and then getting to know all aspects of the world and the interconnected spheres of Islam, ecology, economy and agriculture.

A Muslim with knowledge was also seen as obliged to act upon the knowledge by trying to liberate themselves from the corrupted systems of consumption and economy and instead establish new systems, e.g. in the form of ecovillages based on Islamic principles. Establishing systems of sustainable agriculture and permaculture was also considered a way to get closer to God spiritually and a way to ensure that the food consumed is truly both halal, permissible and tayyib, wholesome.

The informants expressed some enthusiasm over the possibilities for a social movement of transformative Islamic ecology and that it even could eventually change the world. This article and the activists I interviewed are not enough to guarantee that will happen, so I call out for more studies, more teaching, more conferences, more knowledge sharing, more sponsoring, and more physical work in the field.

### Notes

[1] The phrase can be translated as "the most glorified, the most high".

[2] God's peace and blessings upon him.

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