The Practice of Islamic Environmental Ethics: A Case Study of *Ḥarīm* and *Ḥimā*

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Declaration

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

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Statement 1

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Abstract

Environmental Ethics is considered as a discipline of knowledge rather than just an ethical perspective related to environmental issues. Since it is a relatively new discipline, however, most of its scholars are inclined to focus on the theoretical part, while the practical part only really came to the fore after the Brundtland Report in 1987. Therefore, one of the ways to understand the practical dimension of Environmental Ethics is by exploring the concept of Sustainable Development. In the context of this research, sustainable forestry has been chosen to illustrate in more detail the concept of Sustainable Development, which indirectly will represent the practical dimension of Environmental Ethics. The practice of sustainable forestry presents a good model for the contribution of religions in turning the theory of Environmental Ethics into practice.

In this regard, the discourse on Islamic Environmental Ethics also needs to be extended by discussion of the practical dimension. As regards the concept of Sustainable Development, the practice of *Ḥarīm* and *Ḥimā* has been chosen as a case study because of its great similarity to the practice of sustainable forestry. The analysis of the practice of *Ḥarīm* and *Ḥimā* discloses two approaches to practising Islamic Environmental Ethics: the assimilation of substantive *Sharī'ah* laws into environmental regulations and the application of *Uṣūl al-Fiqh* to environmental policy and management. Therefore, the practice of *Ḥarīm* and *Ḥimā* ratifies the potency of applying Islamic principles to contemporary environmental issues and provides a clear approach to turning the theory of Islamic Environmental Ethics into practice.

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Method of Transliteration

All transliterated words (except the name of a person and a group) and book titles have been italicised

Consonants

ء	ʻ	ز	z	ق	q
ب	b	س	s	ك	k
ت	t	ش	sh	ل	l
ث	th	ص	ṣ	م	m
ج	j	ض	ḍ	ن	n
ح	ḥ	ط	ṭ	ه	h
خ	kh	ظ	ẓ	و	w
د	d	ع	`	ي	y
ذ	dh	غ	gh	ة	h
ر	r	ف	f		

Vowels

ـَ	a	ا	ā	اي	ay
ـِ	i	ي	ī	او	aw
ـُ	u	و	ū		

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Abbreviations

BC	Before Christ
CE	Common Era
CNPPA	The IUCN's Commission on National Parks and Protected Areas
EIA	Environmental Impact Assessment
GDP	Gross Domestic Product
IUCN	The International Union for the Conservation of Nature
MIT	Massachusetts Institute of Technology
PACD	The Plan of Action to Combat Desertification
(pbuh)	Peace Be Upon Him
UN	The United Nations
UNCOD	The United Nations Conference on Desertification
UNCCD	The United Nation Convention to Combat Desertification
UNEP	The United Nations Environmental Programme
UNCHE	The United Nations Conference on Human Environment
WCED	The World Commission on Environment and Development
WCS	The World Conservation Strategy
WSSD	The World Summit on Sustainable Development

Chapter 1

Introduction

1.1 Background

Since the emergence of environmental philosophy discourse after the Lynn White debate in the late 1960s, the religious perspective has been discussed widely by academics. The interest in understanding religious thought on modern environmental issues is increasing constantly, and the response of religious groups to establishing a religious perspective is very positive. After almost four decades many institutions have compiled huge volumes of religious teachings related to environmental ethics. Thousands of papers, journals and books have been published on religious environmental ethics. Positively, the role of religion in solving modern environmental crises is already acknowledged.

Religion has been estranged from western academics since the Renaissance in the sixteenth century. Rationalism and empiricism rose up to explain everything, including knowledge, while religion was practised only in church and ritual ceremonies. Then, in the period of enlightenment, 'new beliefs' such as deism, agnosticism and atheism diffused amongst western philosophers and scientists. Separation of religion and human life entered another phase when religion-free ideologies such as positivism and liberalism determined the system of modern life. Finally, European colonials disseminated secularisation all over the world in the age of empire.

In the early twentieth century, however, especially when the discourse of quantum physics was attracting philosophers and scientists, there was hope of reawakening the religious perspective in academia. Einstein's creed, 'science without

religion is blind and religion without science is lame', proved such a tendency among western academics. From the field of Islam, figures like Schoun, Chapra and Hossien Nasr also struggled to promote religious perspectives in the scientific community. Actually, nowadays the religious perspective not only influences science but other disciplines as well. As a result, the discourse of religious perspective in any discipline of knowledge is no longer a stranger to contemporary academia.

Islam as one of the greatest religions in the world has also contributed significantly to the recultivation of values in modern society, especially in relation to environmental ethics. As usually claimed by Muslims, Islam has a comprehensive teaching to guide its followers how to live together with nature. The holy *Qur'ān* is the latest among the holy books revealed by God to help mankind to overcome modern problems. Islam has made a great contribution to human civilization, including the tradition of knowledge before the emergence of Western civilisation. Perhaps it is very relevant now to explore the Islamic perspective on the current environmental crisis caused by religion-free way of life.

The contribution of the Islamic perspective in discussing modern environmental issues began at the end of the 1960s when Nasr wrote his book *The Encounter of Man and Nature: The Spiritual Crisis of Modern Man.*[1] The most prominent recognition of the Muslim contribution to establishing an Islamic perspective was in 1983 when Izzi Dien and four Islamicist colleagues were invited by the International Union for the Conservation of Nature (IUCN) to write a basic paper on Islam and the natural environment.[2] A year later, Sardar compiled thirteen

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[1] S. Hossien Nasr, *The Encounter of Man and Nature: The Spiritual Crisis of Modern Man* (London: George Allen and Unwin Ltd., 1968).

[2] Mawil Izzi Dien, *The Environmental Dimensions of Islam* (Cambridge: Lutterworth Press, 2000), 5.

separate articles especially related to Islamic perspectives on environmental issues named 'Touch of Midas: Science, Values and the Environment in Islam and the West'.[3] Islamic environmental ethics is already established and well-known in environmental studies.

Muslims today, however, are facing another challenge: how to practise Islamic environmental ethics. Clearly, there is no dichotomy in Islam between theory and practice or between value and rule. Indeed, the holy al-Qur'ān emphasizes that *Īmān* (faith) should be always followed by *`Amal*.[4] Basically, *Īmān* refers to principle and paradigm, whereas *`Amal* refers to practice and manifestation. Thus, Islamic environmental ethics not only cultivates values among Muslim societies but also implements those values by establishing policy and legislating regulation. *Ḥarīm* and *Ḥimā* are a good model practised by Muslims, combining the theory and practice of environmental ethics.[5] Therefore, a detailed study of *Ḥarīm* and *Ḥimā* is bound to assist Muslim societies to step forward in practising Islamic environmental ethics. Such practice should be a new focus in the study of Islamic environmental ethics beyond the theoretical discourse.

1.2 Statement of Problem

The concept of Sustainable Development, which was proposed by the Brundtland Report in 1987, is always acknowledged as a new paradigm of development. Sometimes Sustainable Development is also called 'global

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[3] Ziauddin Sardar ed., *Touch of Midas: Science, Values and the Environment in Islam and the West* (Manchester: Manchester University Press, 1984).

[4] *al-Qur'ān*, 103 : 2

[5] Mawil Izzi Dien, 'Islamic Environmental Ethics: Law and Society', in *Ethics of Environment and Development*, ed. J. R. Engel. and J. G. Engel (Tucson: University of Arizona Press, 1990), 196.

environmental ethics' by those who wonder how comprehensive the concept is. Though the concept of Sustainable Development outlines a very complete policy on environmental conservation, philosophically it is still a religion-free concept. The concept is not very different from the previous paradigms of development such as Liberalism and Socialism except in its concern for ecology. Therefore some groups of environmentalists do not favour this human-centred concept.

Basically the solutions to the modern environmental crisis are not to be found in scientific or technological knowledge and application.[6] The roots of environmental crisis come from human conduct, which is motivated by arrogance or spiritual pride. It is not lack of scientific knowledge or lack of sophisticated technology that causes the crisis. Most modern approaches to solving our environmental crisis, however, have inherited religion-free paradigms, which teach nothing about the spiritual and intrinsic values of human conduct. Hence the solutions to environmental crisis should be rich in spiritual and intrinsic values, which frequently come from religious teachings.

While the modern approaches are facing such a problem, the traditional or religious approaches seem to be in deadlock. Discourse of religious environmental ethics is still on the theoretical periphery although it is rich with spiritual and intrinsic values. Maybe Elliot was right when he said:

> It has been recognized that traditional moral theories do not provide natural underpinnings for policy objectives and this has led some to skepticism about the claims of environmentalists and

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[6] D. Kinsley, *Ecology and Religion* (New Jersey: Prentice Hall, 1995), XVI.

> others to the view that a revolutionary reassessment of ethical norms is needed.[7]

Once again, debate on Elliot's claim will prolong theoretical discourse of environmental ethics and possibly will be more philosophical.

Such a situation also applies to Muslim academics, who have discussed Islamic environmental ethics deeply and widely, but most of the Muslim countries do not practise it. In fact, Muslims have a very comprehensive history of ethics of the environment. According to Izzi Dien, the schism between the spiritual and the 'scientific' or modern was imported into the Muslim mind and land when the material and industrial culture was introduced, effectively separating the political system from the tradition of the community.[8] Consequently Muslim countries also face ecological problems in spite of inheriting such comprehensive environmental ethics.

This study will explore the relationships of ethics and regulations in Islamic environmental ethics by focusing on *Ḥarīm* and *Ḥimā*. Actually, the relationship between *Akhlāq* where ethics is usually discussed and *Fiqh* where regulation is formulated is among the fundamentals of Islamic jurisprudence but not many modern Muslim scholars are interested in discussing it. Perhaps, by connecting ethics and regulations, Islamic environmental ethics can be practised effectively in Muslim countries. Apparently, Muslim countries fail to implement their environmental

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[7] S. Elliott, "Philosophical Problems for Environmentalism", in *Environmental Ethics*, ed. R. Elliot (Oxford: Oxford University Press, 1995), 226.

[8] Mawil Izzi Dien, "Islam and the Environment, Theory and Practice", *Journal of Beliefs and Values*, No 18 (1997): 48.

conservation programmes because of their practice of religion-free environmental policies, which are obviously not related to their spiritual and intrinsic values.

1.3 Research Objectives

This study has the following objectives:

a. To examine philosophically the weakness of environmental conservation programmes in Muslim society in the face of their inheritance of holistic environmental ethics and environmental regulations from the Islamic tradition. To this end, this research will take forestry programmes as an example of environmental conservation in Muslim society.

b. To discuss in detail the relationship between ethics and regulations in Islamic jurisprudence in order to establish new dimensions of contemporary *Fiqh*. In order to achieve this objective, the discussion will look specifically into the role of *Uṣūl al-Fiqh* (principles of Islamic jurisprudence) in overcoming contemporary environmental issues, which will be of interest to contemporary Muslim scholars.

c. To compare the practice of Islamic Environmental Ethics with the modern environmental conservation programmes. This objective will be attained by viewing some similar practices in modern conservation programmes like national parks, forest reserve zones and wildlife sanctuaries from an Islamic perspective.

d. To formulate an application plan for Islamic Environmental Ethics as an extension to the theoretical and philosophical discourse. This objective will be accomplished by detailed examination of specific cases in Islamic environmental practice, called *Ḥarīm* and *Ḥimā*.

1.4 Limitation and Scope of Research

Although Environmental Ethics is still new in contemporary academia, this field is developing widely, especially after the Brundtland Report of 1987. As a result, the study of environmental ethics is not only very broad but also cross-disciplinary. This study will specialise in Ecotheology as a branch of Environmental Philosophy, which integrates Theological Studies and Environmental Ethics. Ecotheology itself, however, comprises various perspectives of world religions on answers to current environmental issues. In the context of this research, the study will focus only on the Islamic perspective, which is widely known today as Islamic Environmental Ethics.

Previously, studies on Islamic environmental ethics have looked at the theoretical aspects of Islamic attitudes and values in relation to environmental conservation. Apparently, Islam has been seen to offer a comprehensive environmental ethics for overcoming modern environmental issues, at least to be implemented in Muslim countries. Beyond the theoretical and philosophical discourse, there is a need to make Islamic Environmental Ethics practicable in modern Muslim society. This study will explore the practical dimension of Islamic environmental ethics by focusing on *Ḥarīm* and *Ḥimā*, which have been practised since the period of the Prophet Muhammad (pbuh). Studying *Ḥarīm* and *Ḥimā* in detail will perhaps help Muslim society to implement environmental conservation programmes, which are also considered as their obligation in Islam.

In order to prove the importance of the relationship between ethics and regulation in environmental programmes, this study will make a comparison between the practice of *Ḥarīm* and *Ḥimā* with similar practices in modern environmental conservation programmes like national parks, forest reserves and wildlife sanctuaries. It will only look, however, at the concept of sustainable forestry especially the IUCN forestry categories because it is one of the most well-known programmes, and is authoritative enough to represent most modern environmental conservation programmes. The category may prove to be an appropriate standard to which the practice of *Ḥarīm* and *Ḥimā* may be compared.

1.5 Research Methodology

The objectives of the research will be achieved by the choice of a suitable method. In collecting data, this study will largely use a bibliography survey or library research method. Although this study is going to look at the practical dimensions, its discourse is still around the theoretical and philosophical periphery. Such discourse inevitably needs many references as well as various perspectives. Therefore, the most suitable method is a bibliography survey or library research. Actually, they are both categorised as qualitative methods that emphasise rational or non-empirical arguments. Rational arguments usually apply deductive syllogism, which means a conclusion is derived from some undoubted statement of evidence. In Islamic research, the most undoubted statement of evidence is *al-Qur'ān* and *al-Sunnah.*

There are two categories of data that are gained through library research, which are primary sources and secondary sources. Both of them will be collected for discussion in part one. Most of the data related to part one are, however, secondary sources because these topics have been studied widely before. Conversely, for part

two, that consists of discussions on the role of ethics in Islamic jurisprudence and the practice of *Ḥarīm* and *Ḥimā* in Islamic tradition, the analysis will mostly depend on primary sources. Besides *al-Qur'ān* and *al-Sunnah*, the two undoubted sources of Islamic teachings, these topics will also refer directly to prominent authentic sources that were written by classical Muslim scholars.

The chapters of part two still need secondary sources apart from *al-Qur'ān*, *al-Sunnah* and *al-Kutub al-Mu'tabarah* (prominent authentic sources). In order to strengthen the discussion, some secondary sources related to contemporary analysis by recent Muslim scholars will be collected. These secondary sources will comprise authors who have contributed to the development of contemporary *Fiqh* as well as their expertise in current environmental issues. These secondary sources will relate to the two main sub-themes of part two; first the role of ethics in Islamic jurisprudence and second the practice of *Ḥarīm* and *Ḥimā* in Islamic tradition. These secondary sources are important to enrich the primary data that are gained from prominent authentic sources.

Meanwhile, in analysing the data, this study will emphasis the descriptive method, which means explaining in detail various perspectives or opinions and then reaching a conclusion by generalising the various perspectives. In the descriptive method, some historical data will be explained by means of historiography, meaning chronological explanation of events. Apart from descriptive methods, this study will also use comparative methods. Thus, a comparison will be carried out between the practice of *Ḥarīm* and *Ḥimā* and the modern practice of sustainable forestry. By using this method, this study will identify differences as well as similarities between Islamic practice and modern practice. The most significant aspects will be discussed in detail.

Analysis which involves description, explanation and interpretation is known as hermeneutics. It has been described as the theory and practice of interpretation, which originally applied to biblical criticism.[9] Here, the analysis is done by deriving a rich understanding of the context of data, then giving a comprehensive interpretation. Researchers who use this approach will engage in the explanatory process, which intrudes into the context of data. The hermeneutical approach to research is quite complex, therefore it is always used in philosophical and textual studies. Normally, it needs frequent inquiry, continuous open dialogue and profound discussion, which is very much compatible with this research topic.

In short, the methodology of this research can be categorised as a qualitative method. In contrast with the quantitative method, the qualitative method means that the data it uses exist in the form of words not in the form of numbers. Generally, qualitative methods include a number of approaches, for instance, hermeneutics, phenomenology, naturalism, experiential, dialectical and so on.[10] Qualitative data that are used in this research, however, are evaluated subjectively by a largely hermeneutical approach alongside phenomenology. Clearly, qualitative methods are more compatible than quantitative methods for studying this research topic, which is very much related to philosophy, theology and religious studies.

1.6 Literature Review

Basically this study will look at three main subjects or themes; first, the, practical dimension of Environmental Ethics, second, Environmental Ethics from an

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[9] J. O. Urmson and J. Ree ed., *The Concise Encyclopedia of Western Philosophy and Philosophers*, (London: Routledge, 1992), 131.

[10] K. E. Rudestam and R. R. Newton, *Surviving Your Dissertation A Comprehensive Guide to Content and Process* (London: SAGE Publications, 1992), 31.

Islamic perspective and third, the practice of *Ḥarīm* and *Ḥimā*. Although these subjects are still new as a discipline of knowledge, numerous efforts have been made to study their subject matter. This study intends to continue the discourse on these subjects, but from a different focus as well as a different perspective. One of the differences is that this study intends to emphasise the practical dimension of Environmental Ethics rather than just to look into its theoretical aspects. Most of the previous studies that have widely discussed the theory of Environmental Ethics are, however, still relevant, especially in explaining religious value systems related to human conduct in terms of the environment.

Studies on the practical dimension of Environmental Ethics usually involve some effort to apply ethics to daily life, such as transforming contemporary ethical thought like Deep Ecology so that it is compatible with process theology. In this regard, a study was done by C. A. Palmer in 1992 entitled *Process Theology and the Challenge of Environmental Ethics*'.[11] Actually this study was done to fulfil the requirement of Doctor of Philosophy (D.Phil.) at Oxford University. The purpose of the study was to examine process theology in the light of questions raised by environmental issues. By comparing axiological and deontological approaches, especially what has been proposed by Deep Ecology and process theology, the author seems to emphasise holism and sacredness as important elements in making Environmental Ethics practicable. This study is important because it proposes the role of religious perspectives in the practice of Environmental Ethics.

The response of religious perspectives to the environmental issues possibly became more visible after the Earth Summit at Rio de Janeiro in 1992. In responding

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[11] C. A. Palmer, *Process Theology and the Challenge of Environmental Ethics* (D.Phil. Thesis, Oxford University, 1992).

to the summit, a group of theologians wrote articles related to Ecotheology, which were compiled by David G. Hallman in a book entitled *Ecotheology Voices From South and North.*[12] Although this compilation largely represents the Christian perspective, it is useful in revealing religious solutions towards recent environmental issues. Most of the articles in this book seem to respond to recent environmental issues, and the authors discuss these issues from a religious perspective. Applying religious values is important in practising Environmental Ethics because it can be easily assimilated into societies that are still practising their religion.

In order to enhance the role of religion or belief in Environmental Ethics, there is an effort to explore Traditional Ecological Knowledge. Basically, most Traditional Ecological Knowledge can be considered as the practical dimension of religious teachings related to nature. In pursuing this exploration, Fikret Berkes wrote a book entitled *Sacred Ecology: Traditional Ecological Knowledge and Resources Management.*[13] In this book, Berkes suggested that one of the major elements in establishing Traditional Ecological Knowledge was worldviews or cosmologies, which usually relate to belief systems.[14] He also explored how Traditional Ecological Knowledge has been practised in selected regions in the world. In this regard, Berkes's book is very important to show how religious Environmental Ethics had been practised successfully in traditional societies through their ecological knowledge and resources management.

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[12] David G. Hallman ed., *Ecotheology Voices From South and North* (Geneva: WCC Publications, 1994).

[13] Fikret Berkes, *Sacred Ecology: Traditional Ecological Knowledge and Resources Management* (Philadelphia: Taylor and Francis, 1999).

[14] *Ibid.*, 53 –54.

Apart from reviewing the past, there is also a need to explore the potency of practising religious environmental ethics today. There is a big question: are religious Environmental Ethics still relevant in the present context? Perhaps in order to answer that question, Martin Palmer and Victoria Finlay wrote a book entitled *Faith in Conservation: New Approach to Religions and the Environment.*[15] In this book, the authors explored the ecological worldviews of major world religions and considered how these worldviews could help establish effective environmental policy. Although this book does not explain in depth the practical dimension of religious environmental ethics, the authors give convincing explanations about the principles of religious Environmental Ethics that are applicable to modern practice. Thus, in the context of this research, the book is important in explaining such principles.

Exploring the principles of religious Environmental Ethics can be considered as the first step to practising it. Another author who shares this view is Roger S. Gottlieb. He wrote a book entitled *A Greener Faith Religious Environmentalism and Our Planet's Future.*[16] He observed that religious environmentalism is a worldwide movement that can bring great influence to culture, ecology, society and politics.[17] Gottlieb seems convinced that a religious perspective provides environmental movements with a uniquely appropriate way to uphold their dream of Sustainable Development and a just world, which are important for the development of a global environmental agenda. The book gives a significant contribution to this research

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[15] Martin Palmer and Victoria Finlay, *Faith in Conservation: New Approach to Religions and the Environment*, (Washington: The World Bank, 2003).

[16] Roger S. Gottlieb, *A Greener Faith: Religious Environmentalism and Our Planet's Future* (New York: Oxford University Press, 2006).

[17] *Ibid.*, 113.

because it reveals the potency of applying a religious perspective in modern societies, especially through the political arena.

Clearly, religious Environmental Ethics needs another influential factor that can turn theory into practice. In discussing this issue, Connelly and Smith wrote a book entitled *Politics and the Environment from Theory to Practice*, which is designed to introduce the key concepts and issues in order to explain environmental problems and their political solutions.[18] The authors considered that one of the theories of environmental ethics is religious theory, which they refer to as the concept of stewardship.[19] The book also explains further the process of implementing theory into practice, which is done through politics. In the context of this research, this book is important in explaining the way to practise religious Environmental Ethics by using political streams.

Among religious scholars, Muslim scholars have devoted very much attention to establishing the Islamic perspective on Environmental Ethics, and at the same time have indirectly contributed to strengthening religious perspectives on environmental conservation. One such scholar is Hesam A. M. Joma, who did doctoral research at the University of Pennsylvania in 1991 about Islamic Environmental Ethics. The title of his doctoral dissertation is *The Earth as a Mosque: Integration of the Traditional Islamic Environmental Ethics with Agricultural and Water Development Policies in Saudi Arabia*.[20] In his dissertation, Joma proposed the integration of Islamic environmental principles that derived from *Sharī'ah* in existing contemporary

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[18] James Connelly and Graham Smith, *Politics and the Environment from Theory to Practice*, 2nd Edition (London: Routledge, 2003).

[19] *Ibid.*, 17 – 19.

[20] Hesam A. M. Joma, *The Earth as a Mosque: Integration of Traditional Islamic Environmental Ethics with Agricultural and Water Development Policies in Saudi Arabia* (Doctoral Dissertation, PhD in City Planning, University of Pennsylvania, 1991).

policies. Although his focus was on the concept of the Earth as a mosque, he also discussed *Ḥarīm* and *Ḥimā* as an example of Islamic environmental institutions.[21] The dissertation is very relevant to this research because it gives a very comprehensive view on which practice of Islamic traditions can be integrated in contemporary environmental policies.

Relating to the practical dimension of Islamic Environmental Ethics, the International Union for Conservation of Nature and Natural Resources (IUCN) has published a research report entitled 'Environmental Protection in Islam'.[22] Actually, the research had been published for the first time in 1983 before IUCN published the second revised edition in 1994.[23] Basically, the research proposed a comprehensive Islamic policy towards environmental conservation, although the research was purposely done for the Kingdom of Saudi Arabia. The researchers revealed Islamic worldviews related to the universe, Islamic practices related to natural resources, basic principles of Islamic environmental protection and legislative rules of Islamic environmental regulations. The research report pioneered the first step for future researches in Islamic Environmental Ethics especially related to the practical dimension.

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[21] *Ibid.*, 81 – 89.

[22] Abu Bakr Ahmed Begader, Abdul Latiff Tawfik Al-Chirazi Al-Sabbagh, Mohamad As-Sayyied Al-Glayand, and Mawil Yousuf Izzi Dien, *Environmental Protection in Islam* (Cambridge and Switzerland: IUCN, 1994).

[23] Originally the research was done as feasibility studies in order to establish a central organisation for the protection of the environment in the Kingdom of Saudi Arabia. The researchers were responsible to the government of the Kingdom of Saudi Arabia for recommending laws and regulations related to the protection of the environment. See also Abou Bakr Ahmed Ba Kader, Abdul Latif Tawfik El Shirazy al-Sabbagh, Mohamed Al Sayyed al-Glenid and Mouel Yousef Izzi Dien, *Islamic Principles for the Conservation of the Natural Environment* (Gland: IUCN, 1983), 9.

One of the researchers, Mawil Izzi Dien, extended his contribution by writing a book called *The Environmental Dimensions of Islam* in 2000.[24] He discussed the Islamic view of the environment as an independent voice that contributes to the collective world efforts for conservation as distinct from Western, American and even Japanese perspectives.[25] In general, Izzi Dien has discussed all topics of Islamic Environmental Ethics from an environmental worldview to environmental regulation. At the end of the book, he develops principles of Islamic environmental protection, revealed by the previous IUCN's research report. Therefore, Izzi Dien's book is considered as important in Islamic Environmental Ethics because it introduces holistic ideas. In the context of this research, his observation entitled 'International Efforts Toward Conservation'[26] is chosen as the basis for constructing a model of Islamic Environmental Ethics.

In responding to environmental issues, al-Qaradhāwī, a prominent Muslim scholar, produced a book entitled *Ri`āyah al-Bī'ah fi Sharī`ah al-Islām* in 2001.[27] In this book, al-Qaradhāwī gave a general view of environmental conservation from an Islamic perspective. Although his explanation was quite general, he discussed almost all issues related to the environmental crisis such as natural resources and natural balance. At the beginning of his book, al-Qaradhāwī discussed the role of every discipline of Islamic knowledge such as *Usūl al-Dīn* and *Taṣawwuf* in conserving the environment. Perhaps al-Qaradhāwī's book only conveys a general view of Islamic

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[24] Mawil Izzi Dien, *The Environmental Dimensions of Islam* (Cambridge: Lutterworth Press, 2000).

[25] *Ibid.*, 5.

[26] *Ibid.*, 150 – 163.

[27] al-Qaradhāwī, Yusuf, *Ri`āyah al-Bī'ah fi Sharī`ah al-Islām* (Cairo: Dār al-Shuruq, 2001).

Environmental Ethics, but it is a useful guide for this research in identifying suitable topics and subtopics of Islamic knowledge related to the environment.

In order to strengthen the Islamic perspective, Foltz, Denny and Baharuddin compiled important articles related to Islam and the environment in a book called *Islam and Ecology: A Bestowed Trust*.[28] Basically, this book is seen as an articulation of articles in Islamic Environmental Ethics discussing all aspects, from environmental worldviews to sustainable development. Among its articles, there is one entitled 'The Basis for a Discipline of Islamic Environmental Law', which discusses the application of Islamic laws in environmental conservation.[29] The article also discusses some suggestions on how to practise *Ḥarīm* and *Ḥimā* in contemporary conditions by paying more attention to environmental factors.[30] In the context of this research, this book not only gives basic ideas of Islamic Environmental Ethics, but also how to put the ideas into practice.

For nearly three decades Muslim scholars have been discussing the theory of Islamic Environmental Ethics, so perhaps it is now time to pursue the practical dimension. In fact, some Muslim scholars like Izzi Dien and Llewellyn have initiated such efforts already, but the research on the practical dimension of Islamic Environmental Ethics is still inadequate, and the topic needs more exploration. In this context, Kadikon focused its practice at the micro level. Generally, his research, entitled *An Analysis of Islamic Environment Ethics with Special Reference to Malaysia* tends to analyse the manifestation of Islamic Environmental Ethics in

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[28] R. C. Foltz, F. M. Denny, and Azizan Baharuddin ed., *Islam and Ecology: A Bestowed Trust*, (Harvard: Centre for Study of World Religions, Harvard Divinity School, 2003).

[29] Othman A. Llewellyn, "The Basis for a Discipline of Islamic Environmental Law", in *Islam and Ecology: A Bestowed Trust*, ed. R. C. Foltz, F. M. Denny, and Azizan Baharuddin (Harvard: Centre for Study of World Religions, Harvard Divinity School, 2003), 185 – 240.

[30] *Ibid.*, 210 – 217.

Malaysia.[31] In doing so, Kadikon chose Bakun Hydro Electrical Project as his case study. Similar to Joma's research, Kadikon's research indicates the same model of analysis, which is assimilation of the old Islamic environmental practice with the current one. Such a model of analysis will be applied in this research, but to another Islamic environmental practice, that is, *Ḥarīm* and *Ḥimā*.

Apart from looking into a state or place as a case study, it is possible also to look into the discipline of knowledge. In this regard, the practice of Islamic Environmental Ethics can be studied by viewing environmental aspects in a discipline of knowledge, for instance, Islamic Architecture and Islamic Economics. Related to the discipline of Islamic Architecture, research was conducted by Khasawneh entitled *Environmental Aspects of Islamic Architecture* in 2005.[32] In her research, Khasawneh sorts out some environmental aspects that are usually integrated with Islamic Architecture, and among the environmental aspects are *Ḥarīm* and *Ḥimā*.[33] Her research proposes another model of analysis, which applies Islamic environmental principles to making decisions and taking action. In the context of her research, the decision and the action are related to Islamic Architecture.

Such a model shows another way to recognise the practical dimension of Islamic Environmental Ethics. In the context of this model, Jenkins proposes that *Uṣūl al-Fiqh* offers a systematic approach to turning the theory of Islamic Environmental Ethics into practice. In his article entitled 'Islamic Law and Environmental Ethics: How Jurisprudence (*Uṣūl al-Fiqh*) Mobilizes Practical Reform', Jenkins suggests that

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[31] Sulaiman Kadikon, *An Analysis of Islamic Environment Ethics with Special Reference to Malaysia* (PhD Dissertation University of Wales Lampeter, 2004).

[32] Alaa Abd al-Hadi M. Khasawneh, *Environmental Aspects of Islamic Architecture* (MPhil Dissertation, University of Wales Lampeter, 2005).

[33] *Ibid.*, 78 and 88.

Uṣūl al-Fiqh envisions an alternative practical strategy for Islamic Environmental Ethics.[34] Actually, this study is very much inspired by Jenkins's article, especially in recognising *Uṣūl al-Fiqh* as a suitable mechanism to practise Islamic Environmental Ethics. Therefore, in analysing *Ḥarīm* and *Ḥimā* this study pays great attention to the application of *Uṣūl al-Fiqh*.

By focusing on *Ḥarīm* and *Ḥimā* as a case study, it inevitably needs both models of analysis. Clearly, practice of *Ḥarīm* and *Ḥimā* reveals the assimilation of Islamic environmental practices and the application of Islamic environmental principles. According to a citation survey, however, not many studies have been specifically conducted on *Ḥarīm* and *Ḥimā*, especially from an environmental perspective. Probably the earliest study on *Ḥarīm* and *Ḥimā* was conducted by Ghanem and Eighmy in 1984, and it was published in the *Journal of Arid Environment* under the title 'Hema and Traditional Use Management among Arid Zone Villagers of Saudi Arabia'.[35] Then, in 1986 Grainger and Ganadilly published their research 'Hemas: An Investigation into a Traditional Conservation Ethic in Saudi Arabia' in the *Journal of the Saudi Arabian National History Society*.[36] Both articles investigated the traditional practice of *Ḥimā* in Saudi Arabia and its role in conservation. The articles discovered that *Ḥimā* could be a good model to be practised in Muslim countries in order to protect nature.

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[34] W. Jenkins, "Islamic Law and Environmental Ethics: How Jurisprudence (*Uṣūl al-Fiqh*) Mobilizes Practical Reform", *Worldview: Environment, Culture, Religion*, Vol. 9, No. 5 (2005): 338 – 364.

[35] Y. Ghanem and J. Eighmy, "Hema and Traditional Use Management among Arid Zone Villagers of Saudi Arabia", *Journal of Arid Environment*, Vol. 7 (1984): 287–297.

[36] J. Grainger and A. Ganadilly, "Hemas: An Investigation into a Traditional Conservation Ethic in Saudi Arabia", *Journal of the Saudi Arabian National History Society*, Vol. 2, No. 6 (July 1986): 28–32.

The practice of *Ḥarīm* and *Ḥimā* can be seen as similar to the concept of today's national parks. In this regard, Saleh carried out research to prove the similarity by focusing on the transformation of land management in south-western Saudi Arabia. He then published a paper in 2002 entitled 'A Transformation in Vernacular Landscape of Highlands of South-Western Saudi Arabia'.[37] In his article, he investigated the transformation of *Ḥimā* in south-western Saudi Arabia from tribal lands to public land administered by the government. The article proves that *Ḥimā* can be seen as a practical model to conserve the environment in Saudi Arabia similar to the concept of the national park that has been applied in other countries.

Ḥimā is not only a conservation model, as a national park is, but also a religious practice established by divine law. *Ḥimā* is practised for the purpose of environmental conservation and also for the purpose of obeying God's commandment. Because of its dual character, IUCN are interested to develop the concept of *Ḥimā* so it can be implemented in contemporary Muslim countries. IUCN published a handbook entitled *Al-Ḥimā a Way of Life* in 2007 in order to promote the concept of *Ḥimā* and also to explain its contribution to conserving the environment.[38] The book suggested that Muslim societies might wish to consider using the term *Ḥimā* instead of other terms for their protected areas.[39] Although it offers only a brief explanation, the book is important to encourage more research on *Ḥarīm* and *Ḥimā* as well as to guide researchers with general ideas of an Islamic conservation approach.

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[37] M. A. E. Saleh, "A Transformation in Vernacular Landscape of Highlands of South-Western Saudi Arabia", *International Journal of Environmental Studies*, Vol. 59, Issue 1 (2002): 33–58.

[38] Hala Kilani, Asaad Serhal and Othman A. Llewellyn, *Al-Hima a Way of Life* (Amman: IUCN West Asia, 2007).

[39] *Ibid.*, 19.

1.7 Structure of Chapters

This study will be divided into two parts that consist of eight chapters, including an introduction and conclusion. The first part will explain the practice of modern environmental ethics, beginning with chapter one as an introduction and chapter two entitled 'Environmental Ethics: From Theory to Practice'. Chapter two will discuss the implementation of environmental ethics in contemporary modern societies and the role of religions in the implementation. In chapter three, the discussion will be focused on the concept of Sustainable Development, as a global model for practising modern environmental ethics. Thus, the title of chapter three is 'Sustainable Development as Environmental Ethics'. The discussion on Sustainable Development will be extended in chapter four with more detail on Sustainable Forestry. With the title 'Ethics of Sustainable Forestry: Theory and Practice', this chapter will focus on recent issues of forestry and the IUCN's conservation programmes like national parks, forest reserves and wildlife sanctuaries.

The second part will explain further the practice of Islamic environmental ethics. This part consists of another four chapters, beginning with chapter five, which will discuss the relationship between ethics and regulations in Islamic jurisprudence. Thus, the chosen title for chapter five is 'The Role of Ethics in Islamic Jurisprudence (*Fīqḥ*)', which is suitable for such discussion. The pillar of this research is chapter six, in which the discourse on the practice of *Ḥarīm* and *Ḥimā* will take place. In this chapter, the practice of *Ḥarīm* and *Ḥimā* will be discussed by referring to the tradition of the Prophet Muhammad s.a.w., the discussion of classical Muslim jurists and the recent analysis of contemporary Muslim scholars. Then, with the title 'Blueprint of Islamic Environmental Ethics', chapter seven will discuss the implementation of Islamic environmental ethics in contemporary Muslim societies by using forestry

management as a basis. This chapter will propose a set of formulae to implement Islamic Environmental Ethics.

1.8 Conclusion

In conclusion, the discourse on Islamic Environmental Ethics needs to be extended by discussion of the practical dimension as well the allocation of more space for the contribution of ethics in contemporary *Fiqh*. The relationship of ethics and regulations is very important to Muslim and Western scholars alike, at least in the discipline of Environmental Ethics. This means it is also important to reawaken the concept of values and the concept of duties in making any decision related to developmental policies, in order to replace religion-free paradigms that have caused so many problems to human life, including the current environmental crisis. In this regard, this study will pay more attention to the relationship of ethics and regulations in environmental conservation programmes by focusing on the Islamic perspective.

Chapter 2

Environmental Ethics: from Theory to Practice

2.0 Introduction

Nowadays Environmental Ethics is viewed as a multidisciplinary discipline although it is actually a branch of philosophy. Modern environmental issues have attracted many contributors from various disciplines, which inevitably gives rise to a variety of perspectives. In order to examine what Environmental Ethics is and also to find a better way to practise it, the concept should be clarified. This second chapter will discuss the actual concept of Environmental Ethics, which is derived from a philosophical perspective. It will also explore the relationships between religion and Environmental Ethics by looking specifically at the role of religion in establishing worldview, regulation and culture. It also deals with a recent discipline of Environmental Ethics, which is known as Ecotheology.

Based on the actual concept of Environmental Ethics, this chapter will suggest holistic approaches to practising Environmental Ethics that integrate the roles of individual, family, community and government. The practice of Environmental Ethics translates ethics from a philosophical idea into individual life-style, professional ethics, written regulation, policy of development and state ideology. Through these holistic approaches, the whole human character can be appreciated and the whole of society involved. Finally, this chapter will describe the potency of practising Environmental Ethics in contemporary society by reawakening the religious essence of human life.

2.1 Concept of Environmental Ethics

Environmental Ethics generally comprises issues which are fundamental to practical decision-making related to humans' actions in their natural environment. Certainly, the ethics of human impact upon the environment is not new but has been absorbed by previous generations according to their own moral system. Most religions and folk customs have their own teachings on how man should interact with nature. These teachings were practised, however, as part of religious observance or daily custom. Nowadays such teachings are also very much needed as a discipline that must have its own theory of epistemology. This subject or discipline of knowledge is called Environmental Ethics.

2.1.1 Origin of Environmental Ethics as a Term

Discourse on Environmental Ethics started to develop at the end of the 1960s as a response to the debate on religious and secular perspectives related to environmental issues.[1] It was White who sparked the debate when he accused religions of being sources of ecological crisis. His article in 1967 accused Judaeo-Christianity and other religions of presuming man should dominate the earth. White's accusation has called forth pro and contra opinions, which can be divided into two groups; secularist and religious. The debate on White's accusation was seen at the time as nothing except prolongation of conflict between secularism and religion. Nevertheless, in my opinion, the debate expanded philosophical ideas of the rights and wrongs of human conduct in terms of the environment.

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[1] Lynn White Jr., "The Historical Roots of Our Ecological Crisis", *Science 155*, whole no. 3767, March 10 (1967), 1203-1212. The article was first published in 1967, and since then it has been repeatedly published in many books related to Environmental Ethics.

According to White, Judaeo-Christianity has established a dual worldview by splitting nature into mankind and environment.[2] According to this worldview, mankind was created by God to be superior to the rest of creation. They have special privileges and can dominate the environment as ordered by God in the Bible. This belief changed the pagan worldview, when early Christianity spread all over the Roman Empire. Previously, paganism taught the European community to respect the environment because it was sacred like human beings. The Judaeo-Christianity worldview has influenced the European community to explore the environment in order to conquer it by using modern science and technology. Therefore White called for reformation of Christian teachings by giving the alternative view from St Francis of Assisi (1181-1226 CE).

Since the publication of White's article, hundreds of books and articles have been published using his ideas as a focal point. The impact of White's article on the community of academia, especially environmentalists, philosophers and religious scholars, is very impressive. For some environmentalists and philosophers, White's thesis has revealed the history of the West's superior attitude toward the natural environment, which is influenced by the Judaeo-Christian worldview. On the other hand, religious scholars have argued that the Judaeo-Christian worldview should be described as mandating a stewardship relationship with the natural environment. Therefore the Judaeo-Christian worldview is not the root of the environmental crisis, but part of the solution.

Dobel's assessment of White's thesis is perhaps fair. He accepts White's profound analysis of environmental crisis by linking religions and environmental

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[2] Lynn White Jr., "The Historical Roots of Our Ecological Crisis", *Science 155*, whole no. 3767, March 10 (1967), 1203-1212. The article was first published in 1967, and since then it has been repeatedly published in many books related to Environmental Ethics.

issues, but believes his accusation that the Judaeo-Christian worldview was the starting-point of environmental crisis was over-excessive.[3] Nevertheless, White's thesis has developed the intellectual climate by demonstrating the link between religion and environmental issues. Previously, pure scientists had only discussed these issues when the biochemist Rachel Carson published her *Silent Spring* in 1962.[4] Apart from scientific discussion, White's article has opened another dimension of environmental discourse, related to religions or theology and also philosophy.

Approximately a year later, another article was published by the same journal entitled 'The Tragedy of the Commons'. The article was written by Garrett Hardin, a Professor of Biology from the University of California. Hardin's article discussed the population issues philosophically, although he was not a philosopher. Generally, the gist of Hardin's article concludes that most environmental issues have no technical solution, but we need a fundamental extension in morality. He referred to the population problem as an example which he believed could not be solved in a technical way. In other words, Hardin believed that there is no such thing as freedom in an expanding population unless the world can face unhappiness and tragedy.

Basically, Hardin corroborated the Malthusian theory that the earth is finite in terms of supporting the human population, which naturally grows geometrically or exponentially.[5] Then, Hardin showed his disagreement with Bentham's 'the greatest good for the greatest number', which he thought could not be realised. By referring to a pasture 'open to all' as an example, he concluded that an uncontrolled population

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[3] Patrick Dobel, "The Judeo-Christian Stewardship Attitude Toward Nature", in *Environmental Ethics Reading in Theory and Application*, ed. Louis P. Pojman (Boston: Jones and Bartlett Publishers, 1994), 20-3.

[4] Rachel Carson, *Silent Spring* (Boston: Houghton Mifflin, 1962).

[5] Garrett Hardin, "The Tragedy of the Commons". *Science 162*, whole no. 3859, December 13 (1968), 1243. The article was first published in 1968, and since then it has been repeatedly published in many books related to Environmental Ethics.

would inevitably lead to unrestricted consumption of basic materials, which finally would generate a tragedy. According to Hardin, the only way to prevent the tragedy and also to preserve precious freedom is by relinquishing the freedom to breed.[6]

Hardin's article, similarly provoked scholars to publish books and articles related to this topic. Among the most important was *The Limits to Growth*, which was actually a research report produced by a group of researchers from the Massachusetts Institute of Technology (MIT) that was funded by the Club of Rome.[7] The book published in 1972 claimed that the explosion of the world's population and the current harmful development would destroy natural supporting systems by the end of the twentieth century. Hardin himself continued to defend his thesis by publishing another article in 1974 entitled 'Lifeboat Ethics: The Case against Helping the Poor' in *Psychology Today*.[8] Once again, the debate stimulated philosophical ideas in Environmental Studies, especially in terms of ethics.

Actually, Hardin was not the first scholar to use the 'ethics' phrase in discussing environmental issues. Aldo Leopold had done so much earlier than Hardin. Leopold wrote his article 'The Land Ethics' in 1949. In his article, Leopold related the story of Odysseus who hanged a dozen women slaves whom he suspected of misbehaviour.[9] Odysseus's action was not considered ethically wrong because the ancient Greeks saw slaves just as property. By using this example, Leopold called for an extension of ethics to include human relations with land, plants and animals. In

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[6] *Ibid.*, 1248.

[7] Donella H. Meadows, Dennis L. Meadows, Jergen Randers and William W. Behrens III, *The Limits to Growth* (New York: Universe Book, 1972).

[8] Garrett Hardin, "Lifeboat Ethics: The Case against Helping the Poor", *Psychology Today*. Vol. 8 (1974): 38-43.

[9] Aldo Leopold, "The Land Ethics", in *A Sand Almanac with Essays on Conservation from Round River* (New York: Oxford University Press, 1966), 217.

fact, it was Leopold's article that influenced the rise of modern Environmental Ethics, especially the use of the term 'ethics'.

In 1973 an Australian philosopher, Richard Routley, presented a paper entitled 'Is There a Need for a New, an Environmental, Ethics' the first scholar to use the term 'Environmental Ethics' in discussing environmental issues.[10] Since then, Environmental Ethics has been used widely by many scholars when they discuss the role of ethics and morality in environmental conservation. Also in 1973, Eugene Hargrove founded the *Journal of Environmental Ethics*, which encouraged more publications on this topic. Environmental Ethics is therefore not only a phrase that is used by scholars in discussing environmental issues but is also a discipline of knowledge in Environmental Studies.

2.1.2 Definition of Environmental Ethics

In fact, Environmental Ethics is a new discipline in both Philosophy and Environmental Studies. According to Schere and Attig, Leopold's article was the inspiration for the emergence of Environmental Ethics in the 1970s.[11] This inspiration was stimulated, however, by the debate after White's thesis, which should be considered as a turning-point in the discipline.

2.1.2.1 Definition of Ethics

'Ethics' is a term that is usually used to describe human conduct or human behaviour. Ethics is defined as the science of morality, which means a systematic

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[10] The paper was presented in the XV World Congress of Philosophy. See Richard Routley, "Is There a Need for a New, an Environmental Ethics?", *Proceedings of the XV World Congress of Philosophy*, Vol. 1 (1973): 205 – 210.

[11] Donald Schere and Thomas Attig, *Ethics and the Environment* (New Jersey: Prentice Hall Inc., 1983), 2.

knowledge explaining about morals.[12] A preliminary notion of what is meant by the science of morality will serve to bring out the nature of inquiry in ethical discourse.[13] According to Reese, the term ethics originally comes from the Greek *ethikos* or *ethika*.[14] Actually, the first philosopher to use this term was Aristotle (384-322 BC) in his book *Ta Ethika*, discussing virtuous character and habit.[15] According to Titus, *ethikos* and *ethika* are derived from the Greek word *ethos*, which means human behaviour, custom or character of human action.[16]

Ethics seems synonymous with morals, another classical word that was much used by Cicero (106 - 43 BC) and derives from the Latin adjective *moralis*.[17] *Moralis* was derived from *mos* or *mores*, behaviour, custom or character.[18] Thus, some philosophers consider that ethics and morals are one and the same thing. According to Urmson and Ree, however, ethics discuss the meanings of moral words, for example, the concept of right and wrong or good and bad, which morals generally do not.[19] In

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[12] A. P. Cowie et.al., *Oxford Learner's Pocket Dictionary* (Oxford: Oxford University Press, 1990), 127.

[13] James Seth, *A Study of Ethical Principles*, 11th Edition (Edinburgh and London: William Blackwood and Sons, 1909), 1.

[14] William L. Reese, *Dictionary of Philosophy and Religion Eastern and Western Thought* (New Jersey: Humanities Press and Harvester Press, 1980), 156.

[15] J. M. Baldwin ed., *Encyclopaedia of Philosophy and Psychology*, Vol. II (New Delhi: Cosmo Publications, 1986), 346.

[16] H. H. Titus, *Ethics for Today*, 3rd Edition (New York: American Book Company, 1957), 8. For Aristotle, ethos means things related to character. See Donald J Zeyl ed., *Encyclopedia of Classical Philosophy* (London: Fitzroy Dearborn Publishers, 1997), 221

[17] Baldwin, *Encyclopaedia of Philosophy and Psychology*, 346.

[18] Titus, *Ethics for Today*, 8.

[19] James O. Urmson and Johnathan Ree eds., *The Concise Encyclopaedia of Western Philosophy and Philosophers*, 3rd Edition (London: Routledge, 1991), 100.

other words, ethics is the philosophy of morals or science of morals. Therefore, ethics relates to morals as much as philosophy of science relates to science.[20]

Actually, ethics is a branch of philosophy that investigates morality and in particular the thinking by which human conduct is guided and may be appraised.[21] The Greek philosopher Aristotle divided philosophy into seven branches: logic, ethics, aesthetics, psychology, politics, physics and metaphysics. The Stoics divided philosophy into three branches: logic, physics and ethics.[22] Therefore, as a branch of philosophy, ethics upholds philosophical methods based on logic, reasoning and description in analysing any related issue.[23] This means that Ethics also need rationalist approaches that recognise the role of human thinking, for example, in determining right or wrong and good or bad. Ethics not only reveal what is right and what is wrong, but also provide the reason why it is right and wrong

Sometimes Ethics is defined by scholars as the science of morals, which means a systematic investigation of the ultimate nature of things, the absolute good or the good of the universe itself. As a result, some scholars categorise Ethics as Normative Science.[24] In *the Encyclopedia of Religion and Ethics*, Science is divided into two categories, natural science and normative science.[25] Natural science is related to description and explanation of material things in their reality, while normative

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[20] *Ibid.*, 101.

[21] Allan Bullock and Stephen Trombley, *The New Fontana Dictionary of Western Thought*, 3rd Edition (London: Harper Collins Publishers, 1999), 284. See also F. A. Olafson, *Ethics and Twentieth Century Thought* (New Jersey: Prentice Hall, 1973), 1.

[22] Reese, *Dictionary of Philosophy and Religion Eastern and Western Thought*, 434.

[23] T. I. White, *Right and Wrong: A Brief Guide to Understanding Ethics* (New Jersey: Prentice Hall, 1988), 9.

[24] Baldwin, *Encyclopaedia of Philosophy and Psychology*, 346.

[25] J. Hasting ed., *Encyclopaedia of Religion and Ethics*, Vol. V (New York: Charles Scribner & Sons, 1912), 414.

science is related to justification and arbitration of behaviour in the material world.[26] With regard to this category of science, Lillie defined Ethics as below:

> We may define Ethics as the normative science of the conduct of human beings living in society - a science which judges this conduct to be right or wrong, to be good or bad.[27]

Related to this issue, Seth discussed the relationships of natural science and normative science. According to Seth, there are two types of science, natural or descriptive science and normative or appreciative science.[28] Seth wrote that the purpose of natural science is discovery, by reason, of the actual or phenomenal order that characterises matters of fact, while the purpose of normative science is discovery by the same reason of the ideal order that always transcends and rebukes the actual order.[29] Therefore, natural science seeks to discover the universal law and the principle of order, whereas normative science seeks to discover the universal standard in terms of which we can appreciate the fact of the universe.

Ethics as a normative science is different from natural science that emphasises empirical methods. Normative science is structured knowledge about value systems or standard guidelines to justify an action or conduct of an individual in society. The scope of action or conduct in Ethics does not include all kinds of activities, but only voluntary actions, which take place because of selfish desire or will.[30] Generally this

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[26] *Ibid.*, 414.

[27] William Lillie, *An Introduction to Ethics* (London: Methuen, 1995), 2.

[28] Seth, *A Study of Ethical Principles*, 25.

[29] *Ibid.*, 25-26.

[30] Lillie, *An Introduction to Ethics*, 4.

kind of action or conduct consists of all activities that are attributed by choice, consciousness, experience and intention. As a normative science, the role of Ethics is to justify voluntary actions or conduct based on a recognised value system in a society.

In justifying human actions or conduct, most philosophers who discuss Ethics usually do so from two bases, axiology and deontology. Axiology or theory of value is an approach to justifying actions or conduct based on the principles of right and wrong or good and bad that are committed by people.[31] Axiology accentuates the explanation of value system contents. Deontology or theory of obligation is another approach in Ethics that emphasises the responsibility or obligation of an individual.[32] Therefore, deontology makes justification by distinguishing which action or conduct ought or ought not to be done by humans. Both of the approaches are important because axiology contributes to formulating values, while deontology contributes to explaining morals.[33]

Based on the axiological approach, Ethics and values are sometimes seen as similar or at least having a very close relationship with each other. Literally, values mean the worth or merit of a thing and use of the term began in Economics or Political Economics.[34] The term worth itself usually refers to something that is almost quantitative or countable. However there are so many things that also have worth of some other sort like good, beauty, truth and right. Indeed, philosophers from the time

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[31] Dagobert D Runes, *Dictionary of Philosophy* (New Jersey: Littlefield, Adam and Co., 1981), 99.

[32] *Ibid.*, 99.

[33] *Ibid.*, 99.

[34] Paul Edward ed., *The Encyclopedia of Philosophy*, Vol. 8 (New York: MacMillan and Free Press, 1967), 229.

of Plato have discussed various questions under such topics.[35] Perhaps such discussion started earlier than Plato, as the question of good or bad and right or wrong has been discussed in religion since earliest times.

Some philosophers suggest that the theory of value has three main traditions: subjectivism, objectivism and neo-Kantian rationalism.[36] Subjectivism holds that the only valuable goods are subjective states of sentient beings; while objectivism claims that values must be human-related but they exist independently of us and Neo-Kantian rationalism suggests that value is postulated on the basis of practical reason.[37] Actually, the classification reveals three sources of approach in formulating values: first religion that is very close to subjectivism; second, science that is almost objectivism; and third philosophy that is usually based on rationalism. These three sources play a vital role in evaluating quantitative or qualitative matter.

Another important issue related to ethics is what aspect of human beings should be involved in establishing a standard of values. Hence, human actions or conduct can be evaluated by following this standard of values. According to Ross, the standard of values in determining right and wrong or good and bad should be based on tendency of attitude and tendency of implication.[38] Tendency of attitude means the standard of values that is based on desire to perform an action, while tendency of implication refers to the standard of values that is based on the impact of an action. These two tendencies naturally involve the emotions and feelings of an individual or a society to determine what ought to be or not to be done.

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[35] *Ibid.*, 229.

[36] Edward Craig ed., *Routledge Dictionary of Philosophy* (London and New York: Routledge, 1998), 581-582.

[37] *Ibid.*, 581-582.

[38] W. David Ross, *Foundation of Ethics* (Oxford: Clarendon Press, 1969), 6-7.

However, the standard of values that leads an individual and a society to justify right and wrong or good and bad are normally derived from two established sources, religious teachings and philosophical ideas. From ancient civilisations onwards, these two sources have played a major role in making guidelines related to morals. Then in the Modern Age, Science dominated the role of establishing values and the influence of religious teachings and philosophical ideas seems to decline. Science that was established by the tradition of positivism and empiricism became more dominant after the Industrial Revolution. The combination of science, technology and industry set up a new paradigm of religion-free Ethics, and it led crises of humanity such as the World War I or the World War II, and the environmental crisis. Nowadays religious teachings and philosophical ideas have been restored to deal with such crises with the support of scientific reason.

Ethics is a discourse or theory of morals that debates values systems in order to guide and to justify human conduct in society. In establishing values systems, the debate always considers two bases, axiology and deontology. Religious teachings and philosophical ideas have historically influenced human conduct, so that ethics is always based on either religion or philosophy. In the modern ages, science became another perspective for establishing ethics, in addition to religion and philosophy. These three perspectives should be applied as a holistic approach to the establishment of a new extension of classical ethics such as Environmental Ethics and Bio-Ethics.

2.1.2.2 Definition of Environment

The word 'environment' is used to explain phenomena around humankind, similarly to 'surroundings' or 'circumstances'.[39] According to Collin the word

[39] Cowie, *Oxford Learner's Pocket Dictionary*, 125.

'environment' means the surroundings of any organism including the physical world and other organisms.[40] For Allaby, environment means physical phenomena including biotic or abiotic matter surrounding any living organism.[41] Thus, human environment includes physical phenomena, living or non-living things. In *A Dictionary of Ecology*, the physical phenomena also include climate and weather.[42] Clearly, this meaning only refers to physical phenomena, which can be observed by human empirical senses using scientific methods.

On the other hand, in Social Sciences, Environment also means social phenomena around humankind including politics and economics. These phenomena not only exist but also influence human life like physical phenomena. Moreover, in Religious Studies and Theology, there are also metaphysical phenomena around humankind that cannot be observed by human senses. Most religions in the world teach their followers to believe in metaphysical phenomena that exist around them. However in the context of Environmental Studies, both social phenomena and metaphysical phenomena are usually not included in the concept of environment although these phenomena can also affect human beings.

In Physical Geography, the environment is defined according to a systemic approach as an entire system of a sphere (Earth) consisting of sub-components such as biosphere, atmosphere, hydrosphere and lithosphere. Each sub-component within the entire system has its own sub-components, establishing itself as a self-dependent system. The basic component or the basic system that build the entire system of

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[40] P. H. Collin, *Dictionary of Ecology and the Environment* (Middlesex: Peter Collin Publishing, 1988), 62.

[41] M. Allaby, *Dictionary of Environment* (London: Macmillan Press, 1979), 183.

[42] R. J. Lincoln, G. A. Boxshell and P. F. Clerk, *A Dictionary of Ecology, Evolution and Systematics* (London: Cambridge University Press, 1982), 80.

sphere is a valley. Each sub-component and sub-sub-component until the basic component, which is a valley do interact as well as influent each other. This correlation indeed makes the entire system at the state of equilibrium owing to equal input and output among the sub-components and sub-sub-components.

According to Baldwin, environment can be defined as circumstances and the phenomena surrounding an organism that interact and influence its life in whatever hierarchy it is.[43] In other words, Baldwin's definition emphasises that environment should be looked at as the entire system of the sphere, not only referring to some of its components. In the *Dictionary of Ecology and Environment*, environment has been categorised into four classes:[44]

a. Environment is related to all external influences like temperature and humidity that affect the development, health and activity of an organism.

b. Environment is the whole condition and situation surrounding an organism that influence its life, development and survival.

c. Environment is all factors or entities consisting of living being (biotic) and non-living being (abiotic), which interact with an organism in achieving equilibrium.

d. Environment refers to all physical, chemical and biological phenomena including culture that surround living organisms.

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[43] Baldwin, *Encyclopaedia of Philosophy and Psychology*, 355.

[44] L. L. Somani, *Dictionary of Ecology and Environment*, Vol. 3 (New Delhi: Mittal Publications, 1992), 547-548.

In general, all these definitions agree that environment is the whole phenomena surrounding an organism, which interact and influence its life. However, there is really a need to differentiate between phenomena surrounding humankind and phenomena surrounding other living creatures. The concept of environment that has been discussed in Environmental Studies refers to the phenomena surrounding humankind, and it is always called Human Environment. According to Gilphin in the *Dictionary of Environmental Terms*, human environment means all elements of biotic and abiotic matter, including social factors surrounding humankind.[45] Wolman gives a similar definition, that environment is all the phenomena surrounding a species including physical and social factors that have power to influence its life.[46]

Phenomena surrounding humankind are not only physical factors but also social factors, and both contribute to influencing human life. Although most environmental scientists use the concept of environment to refer to physical factors, in fact social factors also play a very great role in shaping human life as well as in influencing it. Therefore, in my opinion, the most suitable definition of environment refers to human environment, which means all the phenomena surrounding humankind including physical factors and social factors that influence their life. Clearly the phenomena refer to the global ecosystem where humankind live together with other living creatures, which is sometimes called human habitat.

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[45] Alan Gilphin, *Dictionary of Environmental Terms* (Queensland: University of Queensland Press, 1976), 51 – 52.

[46] Benjamin B.Wolman, *Dictionary of Behavioral Science* (New York: Van Nostrand Reinhold Company, 1973), 122.

2.1.2.3 Concrete Definition of Environmental Ethics

From the definition of ethics and the definition of environment that have been explained before, Environmental Ethics combines the essence of both definitions. Thus, I suggest that Environmental Ethics can be defined as a theory of morals and a discourse of value systems that justifies humans' treatment of their environment whether it is right or wrong, so that the theory of morals as well as the value system will guide humankind to act for the sake of environmental conservation. In addition, the theory of morals and the value system can be applied as an ethical code in a community and can also be established as a source of environmental policy and environmental regulation.

The suggested definition of Environmental Ethics seems to be more suitable in the sense of contemporary Environmental Studies. Nowadays, Environmental Ethics is not only a moral practice but also a discipline of knowledge discussing the most appropriate value system in a society with regard to environmental conservation. Indeed earlier generations had practised their folk ecology long before the emergence of modern times, and were influenced by local culture and local belief. The folk ecology taught them what worldview they should believe in, how humankind should interact with their ecosystem, what conduct was considered good or right in terms of the natural world and the punishment they would face for harming the environment.[47]

Folk ecology was mostly inherited by us in the form of custom and belief rather than in the form of disciplined knowledge. Therefore, folk ecology does lack reason, which is assumed to be very important in ethical discourse in order to justify human conduct. In the modern age, folk ecology is no longer practised except in some societies that still strongly believe in religion or practise traditional life. Only when

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[47] Martha Johnson ed., *Lore Capturing Traditional Environmental Knowledge* (Ottawa: Dene Cultural Institute and International Development Research Centre, 1992), 4-8.

the global environmental crisis exploded in the 1960s was there an interest among scholars to revisit folk ecology. Such interest encouraged wide research on this topic, consequently transforming folk ecology into a discipline of knowledge. Besides folk ecology, the interest also led scholars to look for other sources like classical and modern philosophy as well as scientific knowledge.

Actually, Environmental Ethics refers to this discipline of knowledge rather than moral practices related to the environment. As a discipline of knowledge, Environmental Ethics emphasises reasons to justify why an action upon the environment can be considered good or bad, not only a list of environmentally-friendly practices. Inevitably, reasoning is very important to Environmental Ethics, making it applicable not only in individual life but also acceptable as social and international morality. Reasoning is an effort to justify values logically based on a believed worldview or recognised perception of an individual or society, so that those values can be accepted without dispute. Normally such worldviews and perceptions are derived from religious teachings, philosophical ideas and scientific knowledge.

Sometimes Environmental Ethics is also known as Ecological Ethics. Although the meaning of 'environment' and 'ecology'[48] show a slight difference, recently both have been used to refer to similar issues. Among the scholars who use Ecological Ethics are John McCloskey, Ian Barbour and J. Baird Callicott. McCloskey tries to distinguish the concept of Ecological Ethics from Environmental Ethics, but the conceptual divide is narrow.[49] Actually, Environmental Ethics and

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[48] The English term 'Ecology' is derived from Greek *oikos* means house/family and *logos* means study. Therefore Ecology means study of the interactions between organisms and their environment in the same habitat. See Michael Begon, Collin R. Townsend and John L. Harper, *Ecology from Individual to Ecosystem*, 4th Edition (Malden: Blackwell, 2006), vii.

[49] John McCloskey, "Ecological Ethics and Its Justification: A Critical Appraisal", in D. Mannison, M. McRobbie, and R. Routley (ed.), *Environmental Philosophy*, Department of Philosophy, Australian National University, 1980, 65-66.

Ecological Ethics describe the same topic, establishing the value system that is needed to guide human daily activities towards environmental conservation.

2.2 Philosophical Ideas of Environmental Ethics

Similar to other disciplines of Ethics, the discourse of Environmental Ethics usually is an inquiry about values that should be observed and duties that should be performed by humankind. These two approaches in discussing Environmental Ethics originally conform to two philosophical methods of studying ethics that were mentioned previously as Axiology and Deontology. In the context of Environmental Ethics, the Axiological method always focuses on the theory of value that justifies humans' treatment of their environment, whereas the Deontological method focuses on the theory of duty or human obligation to the environment. Both methods are important in order to establish concrete ideas of Environmental Ethics. The following concepts represent a summary of various approaches to understanding the ideas.

2.2.1 Theory of Value

Searching for a value system that may justify human treatment of the environment is one of the philosophical approaches to establishing Environmental Ethics. In other words, there is a need to discover or to formulate a standard value system in a society, so that every single human act upon the environment can be categorised as good or bad. Simply, it can be done by converting some recognised value systems such as naturalism and utilitarianism that are greatly aware of the importance of conservation into an environmental value system. Thus, the only difference between Ethics and Environmental Ethics is that the latter emphasises environmental conservation and has to be enriched with the value of nature.

In this context, perhaps the philosophical question discussed by philosophers in establishing Environmental Ethics may only repeat Axiological inquiry about values. In Axiology, there are two tendencies to justify values, tendency of desire or intention and tendency of implication or consequence. Some schools have been established such as Hedonism, Eudemonism, Utilitarianism and Naturalism. Therefore, in order to establish a value system related to Environmental Ethics, both of the tendencies could be applied. Based on the first tendency, an action upon environment is considered good if it is based on virtuous desire or intention and vice versa. The second tendency emphasises the implication or consequence of an action upon environment in justifying whether the action is good or bad.

Applying such philosophical approaches may provide a quick way to discover or to formulate environmental values. In other words, searching for Environmental Ethics means studying some recognised ethical theories with their relevant values to be applied in environmental conservation. In the context of such a philosophical approach, Jardins gives four reasons why these recognised ethical theories are relevant in founding Environmental Ethics.[50]

a. Ethical theories provide a common language for discussing and understanding ethical issues especially related to environment.

b. Ethical theories have played a major role in our traditions, and they tend to be reflected in the ways in which most of us think.

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[50] Joseph R. Des Jardins, *Environmental Ethics An Introduction to Environmental Philosophy*, 3rd Edition (Australia: Wadsworth Thomson Learning, 2001), 19-20.

c. Ethical theories traditionally offer guidance and evaluation, which can be applied to specific situations and be used to generate specific recommendations.

d. Ethical theories are embedded because they are in common ways of thinking and have been responsible for some of the environmental problems we face.

For some philosophers, it is not necessary to establish a new dimension of ethics (later Environmental Ethics). What is more important is to extend relevant values in recognised ethical theories covering all aspects of relationships between humankind and the environment. Therefore some recognised ethical theories based on philosophy like naturalism and utilitarianism are very much needed for guiding humankind towards environmental conservation. In this regard, religious ethical theories like Islam and Christianity are also relevant in establishing environmental values, which can be used to justify human acts upon the environment. Such ethical theories have contributed significantly to the study of Environmental Ethics and are among the established school of thoughts in this discipline.

However, there is an important question related to theory of values in Environmental Ethics; what is the origin of such values – is it created by human beings or is it something already existing in the world?[51] According to Palmer, there are two kinds of intrinsic values; first, subjective values that refer to intrinsic values created by humankind and attach to their lives and, second, objective values that refer to intrinsic values already existing in nature.[52] Inevitably, the question raises another

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[51] Clare Palmer, "An Overview of Environmental Ethics", in *Environmental Ethics An Anthology*, ed. Andrew Light and Rolston Holmes III (Malden: Blackwell Publishing, 2003), 16.

[52] *Ibid*, 16-17.

debate among philosophers, leading to the emergence of three perspectives for formulating environmental values:

2.2.1.1 Anthropocentrism

The perspective asserting that environmental values apply only to humankind is called Anthropocentrism, which means concern for non-human beings is confined to those having value to humankind. In *Webster's New World Dictionary*, Anthropocentrism is defined as the principle regarding the existence and concerns of human beings as the central fact of the universe, so all that happens in the universe is related to human beings.[53] Clearly this perspective describes subjective values that consider intrinsic values are generated by human factors such as their needs and their interests. Although Anthropocentrism is inclined to evaluate nature exclusively in terms of human values, it does not mean the perspective allows humankind to intrude on non-human beings. The perspective on the other hand does emphasise human factors as central values in protecting human and non-human existence.

Indeed, human factors are identified as the cause of the present environmental crisis, so their values need to be reformed in order to ensure they comply with non-human intrinsic values. Those who uphold the Anthropocentrism perspective believe that only by emphasising human factors in formulating environmental values, can the environmental crisis be solved. For them, it is hard to apply non-human intrinsic values in human life. Among them, Grey suggests human factors should be considered widely, not only related to human interest but also non-human interest.[54]

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[53] *Webster's New World Dictionary*, 2nd Edition (Ohio: William Collins and World Publishing, 1976), 59.

[54] William Grey, " Anthropocentric and Deep Ecology", *Australian Journal of Philosophy*, Vol. 71, No 4 (1993), 475.

According to him, the concept of human values actually represents universal values that include the interest of every non-human being.[55] Therefore emphasising human values means emphasising non-human values as well.

2.2.1.2 Biocentrism

There are certain schools of thoughts that incline to a Biocentrism perspective in formulating environmental values. Biocentrism refers to a perspective that views all life as possessing intrinsic values like humankind.[56] Basically, the Biocentrism perspective enlarges the scope of values that have been marginalised by the Anthropocentrism perspective into life-centred values that consider intrinsic values of other living beings. According to Taylor, in general, the Biocentrism perspective upholds four principles as mentioned below:[57]

a. Humankind is part of the entire living community on the Earth, and also they are considered as an animal species as proposed by Evolutionary Theory.

b. The Earth is a complex natural Ecosystem which consists of interrelated living communities that influence each other.

c. Every single living creature has its own purpose as well as its own need, acquired in a certain manner like humankind.

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[55] *Ibid.*. 475.

[56] Jardins, *Environmental Ethics An Introduction to Environmental Philosophy*, 135.

[57] Paul Taylor, "Biocentric Egalitarianism", in *Environmental Ethics Reading in Theory and Application*, ed. Louis P. Pojman (Boston: Jones and Bartlett Publishers, 1994), 78-82.

d. Humankind should avoid regarding themselves as superior to any other species, nor proclaim themselves master of others.

According to Taylor's principles, humankind have to respect non-human living creatures with whom they share natural resources to survive on the Earth. Those who uphold the Biocentrism perspective believe that every living creature like humankind has its own right to survive. For that reason, humans are prohibited from imposing on non-humans rights in order to fulfil their own interest. Biocentrism groups also oppose Anthropocentrists who they allege inherit the paradigm of human superiority, which is unfriendly to the environment. The most radical school of thought upholding the Biocentrism perspective is the Animal Rights group founded by Peter Singer. This group struggles to protect animal rights as well as to save endangered animals by their worldwide campaigning.

2.2.1.3 Ecocentrism

Besides Anthropocentrism and Biocentrism there is another perspective in formulating environmental values, which is called Ecocentrism. Basically, Ecocentrism proposes the equilibrium of an ecosystem as core values that bind human and non-human beings together. According to Pepper, the Ecocentrism perspective considers humankind as an entity or a component of the entire global ecosystem, and therefore subject to ecological laws.[58] The equilibrium of the ecosystem will be disrupted if humans are doing something against ecological laws. This situation inevitably will cause ecological crisis. Thus, it is more important to perpetuate the

[58] David Pepper, *Modern Environmentalism An Introduction* (London: Routledge, 1996), 38.

equilibrium of ecosystem by obeying ecological laws rather than just to protect animal rights, as proposed by Biocentrism.

Actually, both Biocentrism and Ecocentrism propose universal intrinsic values including human and non-human, beyond humankind values as proposed by Anthropocentrism, However according to Pojman, the Ecocentrism perspective is more holistic than the Biocentrism perspective that he claims inclines to Individualism.[59] O'Riordan wrote that the Ecocentrism perspective first emerged in the Romantic movement of the nineteenth century, proclaiming that humans should establish intimate relationships with Nature.[60] The development of Ecology as a discipline in the second half of the twentieth century helped to boost the Ecocentrism perspective. Such a discipline also helps us to discover ecological laws, which are usually considered as universal intrinsic values.

Most schools of thought in Environmental Ethics are based on these three perspectives in formulating environmental values, but there is another perspective, Technocentrism, which is seldom practised in formulating environmental values, compared with other perspectives. Technocentrism emphasises the ability of humankind to develop technology in solving environmental crisis. According to Pepper, the Technocentrism groups realise the occurrence of environmental crisis but they are very optimistic that efficient environmental management can solve the crisis.[61] O'Riordan believes, however, that the Technocentrism perspective is

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[59] Louis P. Pojman, "Nature Has Intrinsic Value: Biocentric and Ecocentric Ethics and Deep Ecology", in *Environmental Ethics Readings in Theory and Application*, ed. Louis P. Pojman (Boston: Jones and Bartlett Publishers, 1994), 64.

[60] T. O'Riordan, *Environmentalism* (London: Pion Limited, 1976), 3.

[61] Pepper, *Modern Environmentalism An Introduction*, 38.

stimulated by biblical teachings encouraging humans to utilise the *earth's* resources.[62] Clearly, the Technocentrism perspective solves problem-based Environmental Ethics, not value-based or duty-based Environmental Ethics.

2.2.2 Theory of Duty

Another philosophical approach to establishing Environmental Ethics is Deontology, referring to the theory of duty, which means looking for the obligations that should be performed by humankind. The most prominent philosopher in modern times to uphold the theory of duty was Immanuel Kant (1724-1804 CE). He suggested that Ethics should be based on human intention or will in performing an action.[63] In the context of Environmental Ethics, theory of duty emphasises the duty that should be performed by humankind in relating to their environment. Human interaction with the environment is influenced by their attitude toward it, thus it is important to purify the intention of human action. Compared with the theory of values, this philosophical approach emphasises the notion of action rather than its consequence.

Thus, the theory of duty also emphasises good environmental character because it guides right action on the environment. According to Sandler, good environmental character not only leads to proper action but is also beneficial to those who possess it.[64] He adds that appreciating nature as well as loving it enables humans to find reward, satisfaction and comfort from their relationships with nature.[65] Therefore it is important to cultivate good environmental character rather than to force

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[62] O'Riordan, *Environmentalism*, 11.

[63] K. Bertens, *Etika dan Moral* (Kuala Lumpur: University of Malaya Press, 2003), 196.

[64] Ronald L. Sandler, *Character and Environment A Virtue-Oriented Approach to Environmental Ethics* (New York: Columbia University Press, 2007), 2.

[65] *Ibid.*, 2.

an individual to obey environmental values. The theory suggests that man makes an action upon his environment because of his conscience, not because of any other external factors beyond his control. Thus, the theory of duty is used to deal with human character in interacting with the environment rather than human impact.

Kantian ethics have great influence on this philosophical approach towards Environmental Ethics. Jardins wrote that Kantian ethics begins with the claim that humans can be held responsible only for those things under their control, which means the focus of ethics should be on certain principles, what Kant called 'maxims', on which humans choose to act.[66] In the context of Environmental Ethics, the theory of duty needs to answer the question; what are the maxims that motivate an individual to act properly with regard to the environment? Kant suggested that a moral action is an action done by an individual in order to fulfil his obligations or duties.[67] So, this means a right action on the environment should be complied with human obligations or duties to the environment.

The answer leads to another question; what are human obligations or duties to the environment? Perhaps, the answer to this question is the essence of environmental duty as a basis of deontological approach towards Environmental Ethics. In answering this question, Kant proposed two principles that can explain human obligations or duties: first Categorical Imperative; and second, Hypothetical Imperative.[68] Therefore, human obligations or duties to the environment can be explained in the light of these two imperatives, as below:

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[66] Jardins, *Environmental Ethics*, 29.

[67] Bertens, *Etika dan Moral*, 197.

[68] Gordon Graham, *Eight Theories of Ethics* (London: Routledge, 2004), 108-110.

2.2.2.1 Categorical Imperative

Based on Kantian Ethics, Categorical Imperative is defined as the supreme principle of morality that guides an action not to contradict universal law.[69] According to the Categorical Imperative, humans need to perform their moral obligation without asking why they should do it, because humankind has fundamentally as well as universally considered it. In Raphael's view, Kantian Ethics gave three circumstances explaining the fundamental principles of moral obligation:[70]

a. Act as if you were legislating for everyone, which means when you are considering whether an action is right or wrong, you should ask yourself whether you would want everyone to act in that way.

b. Act so as to treat human beings always as ends and never merely as means, which means you have to interact with anyone on the recognition that s/he has desires and choices as you have.

c. Act as if you were a member of a realm of ends, which means you should act as a member of a community of persons, all of whom make moral decisions.

Perhaps, Kantian Ethics seems to recognise Altruism as a basis of moral obligation. Apart from this, Kantian Ethics also emphasises the importance of worldview as an a priori principle in justifying human duties in their life.

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[69] Bullock and Trombley, *The New Fontana Dictionary of Western Thought*, 108.

[70] D. D. Raphael, *Moral Philosophy* (Oxford: Oxford University Press, 1994), 55-56.

Based on the above, the Categorical Imperative establishes human fundamental moral obligation; treat other people as ends and never as mere means or as objects.[71] In this sense, Altruism is probably the most idealistic principle for Western philosophers in guiding humans to treat others. According to Raphael, Altruism means behaviour that benefits another at some cost to oneself.[72] Contra to Egoism, Altruism teaches humans to seek benefits of others as well as to avoid harm. In other words, Altruism also promotes responsibility in treating others including non-human beings with respect to their rights. Although Kant denied that his ideas are those of Altruism principles, there are many points of convergence between his ideas of Categorical Imperative and Altruism.

Kant claims, however, that Categorical Imperative needs something beyond Altruism, which is inevitably very close to Kantian rationalism. Thus, the foundation of moral obligation should comply with the rational principles of ethics, which Kant refers to as universal law.[73] Such an idea of ethics has parallel interests with Environmental Ethics. In this regard, Sandler agrees with the idea that universal law should be considered as a basis of Environmental Ethics, and he classifies it as Naturalism.[74] This means like other non-human beings, humankind are subject to the law of nature. However, Sandler seems to neutralise his idea of virtue-oriented Environmental Ethics by considering teleology as an additional consideration apart from Naturalism. He wrote that teleological considerations are needed because

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[71] Jardins, *Environmental Ethics*, 30.

[72] Raphael, *Moral Philosophy*, 119.

[73] Simon Blackburn, *Being Good A Short Introduction to Ethics* (Oxford: Oxford University Press, 2001), 120-121.

[74] Sandler, *Character and Environment A Virtue-Oriented Approach to Environmental Ethics*, 13-14.

character traits are evaluated according to their conduciveness to promoting certain ends.[75]

Besides Altruism, Kantian Ethics also recognises worldview as another factor that can influence human character. Worldview or *Weltanschauung* refers to a general conception of the world, particularly as containing or implying principles of value systems.[76] Usually the term 'worldview' is applied to a philosophy affecting the practical attitudes and beliefs of its adherents.[77] In the context of Environmental Ethics, worldview is very important for revealing the ideas and beliefs of human relationships with the universe, especially their environment. Usually, humans should realise their moral obligations or duties to the environment when they believe in a certain worldview. An environmentally-friendly worldview inevitably leads humans to nurture the environment and vice versa. Therefore, worldview in this sense plays a major role in establishing environmental duty as well as good environmental character.

In fact, there are three sources of knowledge whence a worldview emanates; religion, philosophy and science. Among these three sources, religion is considered to play a major role in influencing people's worldview. Certainly most of the great religions in the world teach their followers to believe in a set of conceptions of the universe. This means religious followers have to interact with their environment according to what they believe in. Therefore, religions may help to strengthen duty-oriented Environmental Ethics by performing environmentally-friendly worldview as an important account of making good environmental character. In other words,

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[75] *Ibid.*, 28.

[76] Bullock and Trombley, *The New Fontana Dictionary of Western Thought*, 920.

[77] Antony Flew, *A Dictionary of Philosophy* (London: Pan Books Ltd., 1979), 344.

religion is also recognised as a contemporary approach to establishing Environmental Ethics.

2.2.2.2 Hypothetical Imperative

Basically based on Kantian Ethics, Hypothetical Imperative is defined as the opposite to Categorical Imperative. According to Graham, Kant proposed his idea of Hypothetical Imperative as well as Categorical Imperative in order to provide an alternative account of practical reason as suggested by David Hume.[78] In this sense, Hypothetical Imperative perfects Kantian Ethics by recognising the actual circumstances of doing something. Thus, human conduct not only obeys universal or moral law, as proposed by Categorical Imperative, but also considers the real condition. In other words, both theoretical reason and practical reason help to establish rational principles of ethics that influence human character.

Hypothetical Imperative means conditional imperative, referring to an obligation or duty that is enforced in order to gain the appropriate desire.[79] Kantian Ethics seem to accept the consequentialist approach, although the consideration of applying this approach needs to meet certain conditions. Therefore, desire has a circumscribed role in determining moral obligation or duty, as long as it is not going against universal or moral law. For instance, Kant suggested at the end of his life that everybody is prohibited from telling lies even if the condition of telling lies is needed to avoid an innocent person to be killed by his opponent.[80] Hypothetical Imperative in

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[78] Graham, *Eight Theories of Ethics*, 108.

[79] Bertens, *Etika dan Moral*, 197.

[80] *Ibid.*, 199.

this regard is a secondary factor in determining moral obligation or duty, Categorical Imperative being the primary factor.

However, in the context of Environmental Ethics, Hypothetical Imperative gives more opportunity for environmental goals to be involved in generating good environmental character. Nowadays most environmental conservation programmes consent to preserve the equilibrium of ecosystem by paying great attention to ecological principles. In relation to Environmental Ethics, ecological principles can be regarded as appropriate desire, on which environmental obligation or duty is enforced. Furthermore, such aspects as appropriate desire, which is to preserve the equilibrium of the ecosystem, is considered parallel to universal or moral law. Therefore, the combination of Hypothetical Imperative and Categorical Imperative, as has been shown, provides a very good reason to apply Kantian deontological approaches in establishing Environmental Ethics.

Nowadays, the intention to preserve the equilibrium of ecosystems is shared by all nations in the name of Sustainable Development. The human-centred policy was declared during the Earth Summit in Rio de Janeiro in 1992.[81] Sustainable Development outlined the obligations or duties that should be performed by all nations to meet human needs by conserving the environment. As a result, some environmentalists consider Sustainable Development as Global Environmental Ethics because of its role in establishing human obligations or duties. Clearly, the Hypothetical Imperative approach has been applied in this context. For this reason, Kantian ethics has great potential to make Environmental Ethics practicable by considering contemporary environmental issues.

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[81] The Earth Summit is the ultimate reaction taken by the world's leaders to address the environmental crisis. Following the Earth Summit, the Rio Declaration showed the commitment of all nations to conserve the environment and Agenda 21 contained the action plans to this end.

2.3 The Role of Religion in Environmental Ethics

Religion plays a major role in influencing humans' conduct with regard to their environment. Many people today still believe that ethics is tied up with religion, hence their conduct should comply with religious norms. Because human conduct is considered as the most important factor that changes the environment, religious norms are identified as the best solution. In this regard, religion provides value or duty systems to be followed by humankind before taking any action upon the environment. Thus, many environmentalists suggest a new dimension of Environmental Studies discussing the relationships between religion and environmental conservation. Surely, the new dimension is closely related to Environmental Ethics.

Lynn White's article 'The Historical Roots of Our Ecological Crisis' on the one hand blames religion as the root of the environmental crisis, but on the other hand seems to concede the role of religion in cultivating good characteristics with regard to the environment. White appreciates the role of Saint Francis of Assisi in proposing an alternative Christian worldview of nature and human's relation to it.[82] At the least, White's article stimulated a new series of dialogues between religion and philosophy in the name of environmental conservation in the 1960s. The dialogue has progressed to strengthen the new dimension of Environmental Studies, which is sometimes also called Ecotheology. Ecotheology is a branch of Environmental Ethics which discusses the theological and ethical perspectives of the environmental crisis.

However, religion has almost been isolated in terms of decision-making regarding environmental issues. Because of the isolation, most environmental policies and strategies, especially those issued by the United Nations (UN), tend to be human-

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[82] White, "The Historical Roots of Our Ecological Crisis", 1210-1212.

centred. For instance, the first principle of the Rio Declaration in 1992 revealed just such a tendency:[83]

> Human beings are the centre of concern for Sustainable Development. They are entitled to a healthy and productive life in harmony with nature.

According to Boyd, since the 1950s most environmental policies and strategies have been issued on the assumption that humankind is the centre of concern.[84] It is likely that such a tendency will cause injustice to other non-human beings because of merely focusing on human interests. Furthermore, most of the policies and strategies are not only human-centred, but are also considered as religion-free.

In response to these human-centred policies and strategies, certain schools of thought have emerged, such as Animal Rights and Deep Ecology. They adopt Biocentric and Ecocentric tendencies, which they claim are more holistic and fairer. Thus, Cobb suggests modern society needs a holistic perception that pays more attention to the environment than human interest as exemplified in the western Environmental Ethics.[85] As a theologian, Cobb obviously refers to religion, which definitely teaches humans to appreciate their environment. Most of the great religions in the world have their own teachings, not only guiding humankind to behave properly to non-human beings, but also indoctrinating them with holistic cosmology.

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[83] "Rio Declaration on Environment and Development 1992", in *Environmental Ethics: Readings in Theory and Application*, ed. Louis P. Pojman (Boston: Jones and Bartlett Publishers, 1994), 501.

[84] J. M. Boyd, "The Role of Religion in Conservation", *The Environmentalist*, 4 (1984), 40.

[85] J. Cobb, "Ecology, Ethics and Theology", in *Valuing The Earth: Economics, Ecology and Ethics*, ed. H. E. Daly and K. N. Townsend (Cambridge: MIT Press, 1993), 211.

Moreover, most people today still believe in God and practise religious ritual, regardless of the strength of their belief and practice. Such phenomena indicate that religion is still a significant factor in guiding people to do something good. In other words, the role of religion in ethics is still relevant even though religion has been isolated, especially in Western society over the last four centuries. In some societies, religion remains a dominant factor in determining individual conduct as well as communal practice. Therefore, according to Baharuddin, religious factors should be involved in environmental decision-making because the factors are still relevant and significant.[86] In order to overcome the environmental crisis, religion could play a major role in guiding humankind through the approaches enumerated below:

2.3.1 Establishment of Harmonic Worldview

Man's attitude to nature is mostly influenced by his worldview or *Weltanschauung*. A worldview contains a set of ideas about the position of humankind in this world and their relationship with the universe. At the micro level, the universe consists of living and non-living components existing around humankind, including animals and vegetation. In another sense, a worldview is 'ecological principles' believed by an individual or a community that help in explaining the relationships of humankind with nature. These 'ecological principles' play a major role in shaping individual or a communal character as well as guiding actions with regard to nature, even though these principles may not be valid according to scientific argument.

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[86] Azizan Baharuddin, "Science, Values and the Environment: On the Need for a Coherent and Holistic Worldview", in *Environment and Development: Ethical and Educational Consideration*, ed. Azizan Baharuddin (Kuala Lumpur: Institut Kajian Dasar, 1995), 208.

Baharuddin adds that an inharmonious worldview is considered to be the main factor causing the current environmental crisis.[87] Perhaps modern science that is based on positivism can be considered as one of the factors that establish an inharmonious worldview. Positivism proposes an epistemology that believes the empirical method (scientific) is the only way to discover the reality of the universe. In other words, there is no explanation about the reality of the universe from other than scientific knowledge, even from a religious perspective. Positivism introduces a religion-free worldview that viewing the universe only consists of physical matters, so that the universe is apparently regarded like a variety of mechanical components which exist around human beings.

The religion-free worldview as proposed by positivism, however, may not influence all societies in the modern world, but it is dominant enough to determine their action upon the environment. In reality, the religion-free worldview erodes the sense of sacred values in human activities and encourages humankind to conquer nature. The human domination over nature through science and technology is the result of this kind of inharmonious worldview. Basically, this was the gist of White's thesis about the historical roots of the environmental crisis. However, White made a great mistake for criticising Judaeo-Christian doctrine and other religions. In this regard, he actually failed to identify the actual inharmonious worldview. Therefore, re-awakening of harmonious worldviews is very important in the face of the challenges of the current environmental crisis.

The knowledge about reality of the universe has developed since ancient times, and is known as cosmology. The development of cosmology in the past was strongly influenced by the belief of a community and their religion. In considering

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[87] *Ibid.*, 212.

this matter, Bakar explains that the relationship of cosmology and religion is as follows:[88]

> There is no society but has their own cosmology. From the primitive nation to the civilized nation, surely all of them have their ideas about universe, which are considered as an important part of their belief system. Thus, before the modern ages, it was religion that played a major role in establishing cosmology.

It is true that some questions about the origin of the universe, the ending of the universe and the relationships of humankind and the universe are considered as part of religious doctrine even today. Thus, religious doctrine is still relevant to a re-awakening of a harmonious worldview of environmental conservation.

2.3.2 Establishment of Holistic Moral System

The recent environmental crisis seems to signal that a reformation of moral systems is badly needed either at an individual level or at a community level. In the context of an individual level, it is important to cultivate environmental norms as well as environmental characters, so that everyone will realise his/her responsibility to conserve nature. Environmental norms and environmental characters are important to guide an individual on suitable actions in his/her environment and what ought not to be done. Cultivation of environmental norms and environmental character at a higher level also will establish a community that always realises their responsibility to protect the environment.

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[88] Osman Bakar, "Kata Penghantar", in *Sains, Teknologi, Kesenian dan Agama,* ed. Osman Bakar and Azizah Hamzah (Kuala Lumpur: University of Malaya Press, 1992), 4.

In order to overcome the environmental crisis, it is important to ensure each community maintains an environmentally-friendly moral system. Such a system will yield environmentally-friendly rules, either unwritten rules like customs or written rules like laws. According to Gottlieb, those who uphold such a moral system will be able to distinguish between need and want, between legitimate human ends and addictive compulsion, and therefore good environmental rules may be an outgrowth of such community.[89] In Gottlieb's opinion, environmental rules and regulations have to be built on a moral system that is related to environmental norms and environmental characters, Thus, it is important to find the best way to cultivate such a moral system in a community.

Possibly, the best way to cultivate an environmentally-friendly moral system is through religion, because it has a great influence on an individual and a community. According to Gottlieb, religion provides primary values concerning our place in the universe, our obligations to other life forms and what makes up a truly good life.[90] Clearly, religion plays a major role in establishing a moral system in an individual as well as in a community, as has been proven by the history of human civilisation. The contribution of religion does not stop here; as argued by Gottlieb, the religious moral system can yield good environmental rules to be implemented in a country. Thus, the role of religion in Environmental Ethics is very important in order to cultivate environmentally-friendly moral systems and also to establish good environmental regulations and policy.

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[89] Gottlieb, *A Green Faith Religious Environmentalism and Our Planet's Future*, 53.

[90] Roger S. Gottlieb, "Religion in an Age of Environmental Crisis", in *This Sacred Earth Religion, Nature and Environment*, ed. Roger S. Gottlieb (New York: Routledge, 2004), 11.

2.3.3 Establishment of Environmentally-Friendly Lifestyle (Culture)

Individual lifestyle and communal culture can also influence human action with regard to the environment. The meaning of lifestyle includes a community's social practice, tradition, culture and every other way of life it pursues.[91] In other words, lifestyle refers to the way an individual and a community behave in running their daily life, for example, how they consume foods and utilise resources. Human daily life will inevitably involve interactions with nature, and hence individual lifestyle and communal culture can surely affect the environment. Therefore, an environmentally-friendly lifestyle will have positive impact on the environment and preserve its equilibrium, whereas an environmentally-unfriendly lifestyle will cause destruction and imbalance.

Normally, individual lifestyle and communal culture are influenced by other factors. Some of the factors are religious orientation, cosmopolitanism, technological views and political attitudes.[92] However, today, individual lifestyle and communal culture are mostly influenced by economic prosperity, which means those who have money can consume whatever they want without any consideration of conservation and justice. Such lifestyle and culture will surely promote luxurious consumption or reckless spending, and at the end will threaten natural resources. In the industrial age, such lifestyle and culture were supported by industry sectors that extracted materials from natural resources. In fact, this is the root of some ecological problems such as species extinction, resource scarcity, economic disparity and habitat destruction.

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[91] Mani Monto, L. S. Ganish and Koshy Varghese, *Sustainability and Human Settlements: Fundamental Issues, Modeling and Simulations* (New Delhi: SAGE, 2005), 105.

[92] Peter Ester, Henk Vinken, Solange Simoes and Midori Aoyagi-Usui, "Culture and Sustainability", in *Culture and Sustainability A Cross-National Study of Cultural Diversity and Environmental Priorities among Mass Publics and Decision Maker*, ed. Peter Ester, Henk Vinken, Solange Simoes and Midori Aoyagi-Usui (Amsterdam: Dutch University Press, 2003), 19.

Therefore, according to Sterling, in order to overcome these problems, such lifestyle and culture need to be refined and reformed to become environmentally friendly.[93] In section 13 of the *World Conservation Strategy* (WCS), the same vocabulary has been used by IUCN to ask global societies to change their lifestyle and culture.[94] Instead of economic prosperity, religion could be an alternative for redirecting inharmonious lifestyle and culture towards environmental conservation. Religion indeed has great potential to change human perception as well as human attitude with respect to nature. Most great religions encourage their followers to practise simple and moderate lifestyles, thus they have to consume resources wisely. Therefore, religion can be considered as an agent of change in a society that can turn inharmonious lifestyle and culture into environmentally-friendly ones.

Clearly religion is still relevant to modern societies, especially in finding suitable solutions for the environmental crisis. Positively, religion offers holistic solutions to face such a crisis, including not only theoretical approaches but also practical approaches. Religious solutions pay attention to elements of humankind such as spiritual aspects like belief and worldview and physical aspects like conduct and lifestyle. The following figure illustrates the model of religious Environmental Ethics.

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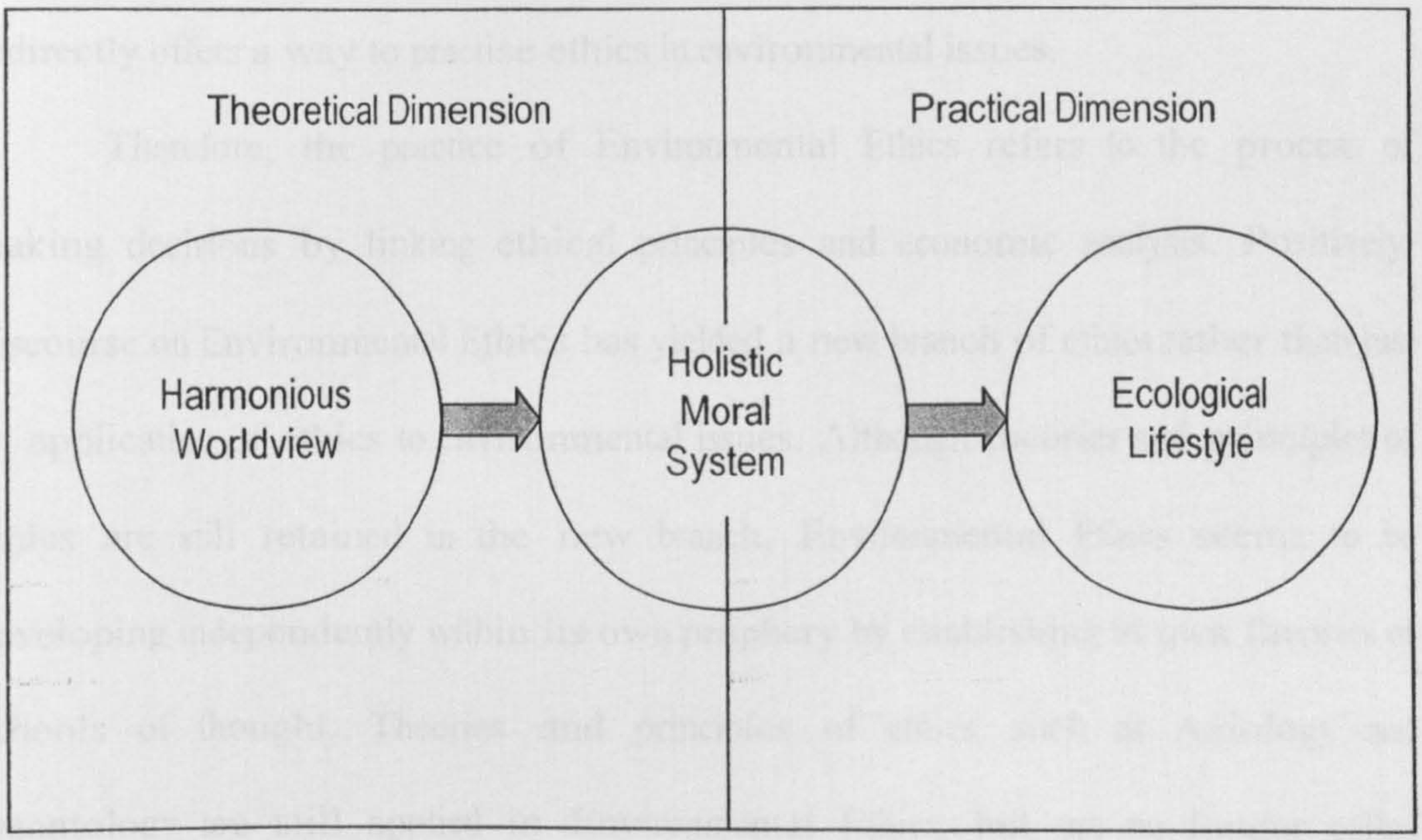
[93] S. R. Sterling, "Culture, Ethics and the Environment: Towards the New Synthesis", *The Environmentalist*, 5 (1985), 199.

[94] International Union for Conservation of Nature and Natural Resources (IUCN), *World Conservation Strategy* (Gland: IUCN, 1980).

Figure 2.1



Model of Religious Environmental Ethics

2.4 Holistic Approaches to Practising Environmental Ethics

In fact, it is hard to draw a clear-cut boundary between the theoretical dimension and the practical dimension of Environmental Ethics. One of the reasons is that Environmental Ethics itself is considered as applied ethics, which apparently means the way to practise ethics. According to Jardins, since the 1970s an applied ethics format has been used to identify and clarify environmental issues and analyse the issues in term of theory and principle.[95] He suggests further that ethics could contribute to environmental debate by applying ethical principles to economic

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[95] Jardins, *Environmental Ethics*, 40.

analysis.[96] Actually, most policies and strategies for development are formulated from economic analysis, and thus the application of ethical principles in the analysis indirectly offers a way to practise ethics in environmental issues.

Therefore, the practice of Environmental Ethics refers to the process of making decisions by linking ethical principles and economic analysis. Positively, discourse on Environmental Ethics has yielded a new branch of ethics rather than just an application of ethics to environmental issues. Although theories and principles of ethics are still retained in the new branch, Environmental Ethics seems to be developing independently within its own periphery by establishing its own theories or schools of thought. Theories and principles of ethics such as Axiology and Deontology are still applied in Environmental Ethics, but are no longer called Hedonism, Egoism, Altruism and Utilitarianism. On the other hand, Environmental Ethics is developing its own theories such as Deep Ecology, Shallow Ecology, Eco-Socialism, Eco-Feminism, Gaia and Animal Rights.

Perhaps Ziman is right to suggest that knowledge progress leads to cognitive changes, while cognitive changes at the highest point lead to institutional change, and among the institutional changes is the emergence of a new discipline.[97] Clearly, Environmental Ethics was the result of environmental debates during the 1970s, which produced cognitive changes and then institutional changes. Since that time, Environmental Ethics has been developing as a distinctive discipline of knowledge consisting of theoretical and practical parts.[98] Since it is a new discipline, most of its

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[96] *Ibid.*, 40.

[97] Ziman, John M., *An Introduction to Sciences Studies: The Philosophical and Social Aspects of Science and Technology*, Cambridge: Cambridge University Press, 1987, 91-94.

[98] Richard G. Botzler and Susan J. Amstrong, "Introduction", in *Environmental Ethics Divergence and Convergence*, 2nd edition, ed. Richard G. Botzler and Susan J. Amstrong (Boston: McGraw Hill, 1998), 2.

scholars are inclined to focus on the theoretical part, while the practical part only really came to the fore after the Earth Summit in Rio de Janeiro in 1992. Before the Earth Summit, most of the discourse of Environmental Ethics focused on theory.

Perhaps the concept of Sustainable Development had a significant influence on turning the theory of Environmental Ethics into practice. The concept of Sustainable Development proposes an alternative policy for development, merging ecological goals and economic goals. In this regard, the practice of Environmental Ethics usually refers to environmental policy such as the concept of Sustainable Development. According to Connelly and Smith, environmental policy consists of three elements, which are relevant regulations, economic instruments and voluntary actions.[99] In other words, environmental policy covers all aspects of social changes from the individual level to the state level. Therefore, in my opinion, the practice of Environmental Ethics can be achieved by transforming its theory into individual lifestyle, code of profession, written regulation, policy of development and state ideology.

2.4.1 Environmental Ethics as an Individual Lifestyle

The theory of Environmental Ethics could be transformed into individual lifestyle by the cultivation of environmentally-friendly norms. Individual lifestyle refers to the way an individual runs her daily life, including the way she meets her needs and the way she interacts with nature. In this context, a psychological approach obviously contributes very much to moulding a lifestyle that has an environmentally-friendly character.

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[99] Connelly and Smith, *Politics and the Environment from Theory to Practice*, 149.

2.4.2 Environmental Ethics as a Code of Profession

Code of profession refers to professional ethics, which means a set of ethics that must be upheld by a person working in a profession such as medicine or engineering. Thus, the theory of Environmental Ethics should be implemented as a professional code of conduct in order to ensure members of the profession do not harm nature. Among the professions that deal largely with nature are those of engineers and architects.

2.4.3 Environmental Ethics as a Written Regulation

The theory of Environmental Ethics must also be translated into legal language like act, enactment and law. Usually, the theory of Environmental Ethics is practised in the form of unwritten regulations like custom. Establishment of an environmental act or environmental law, would involve an element of enforcement and punishment. Such an element is very important in environmental conservation as a check and balance in society.

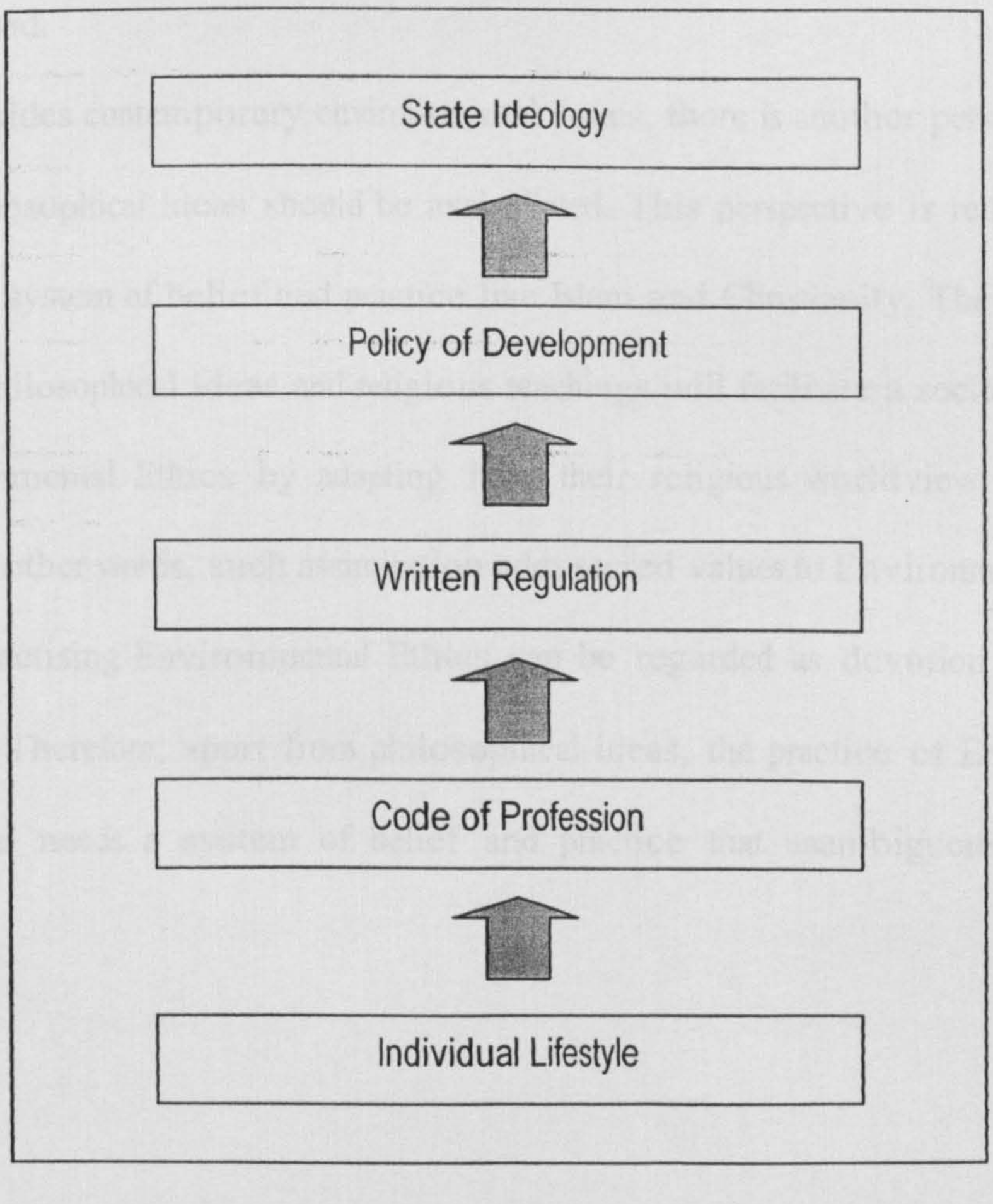
2.4.4 Environmental Ethics as a Policy of Development

Policy of development refers to any plan or blueprint that generates a way to develop socio-economics in a country or a state. At the state level, policy of development usually refers to short-term and long-term policy of economic development including fiscal budgets. The concept of Sustainable Development and Agenda 21 are among the examples of policies of development at the international level. Thus, in order to practise Environmental Ethics, its theory needs to be taken into account as the basic principles of formulating such policies.

2.4.5 Environmental Ethics as State Ideology

Establishing state ideology is possibly the ultimate in practising Environmental Ethics. During the Cold War, countries were divided into the Eastern Bloc that upheld communism and the Western Bloc that upheld liberalism. At the end of the Cold War era, environmentalism emerged as an alternative state ideology. However, there is no country that completely upholds solid environmentalism as its ideology, so environmentalism as a state ideology is usually considered a Utopian dream.

Figure 2.2



Hierarchy of Practising Environmental Ethics

2.5 Conclusion

In conclusion, the philosophical theory of ethics such as Axiology and Deontology still remains an important source of Environmental Ethics. Although Environmental Ethics has been developing independently over the last three decades, the discourse of the subject is still focused on the philosophical periphery. The development of Environmental Ethics has stimulated the new dimension of ethical studies known as Applied Ethics. In addition to this, Environmental Ethics can also be considered as part of Applied Philosophy in contemporary academia. However, in order to make it practicable and applicable, the integration of philosophical ideas and contemporary environmental issues related to ecology, economics and politics is very much needed.

Besides contemporary environmental issues, there is another perspective with which philosophical ideas should be assimilated. This perspective is religion, which refers to a system of belief and practice like Islam and Christianity. The assimilation between philosophical ideas and religious teachings will facilitate a society's practice of Environmental Ethics by adapting it to their religious worldview, morals and culture. In other words, such assimilation adds sacred values to Environmental Ethics, so that practising Environmental Ethics can be regarded as devotion to religious teachings. Therefore, apart from philosophical ideas, the practice of Environmental Ethics also needs a system of belief and practice that unambiguously exists in religion.

Chapter 3

Sustainable Development as Environmental Ethics

3.0 Introduction

This chapter will discuss the concept of Sustainable Development as a global environmental agenda of the United Nations (UN) with regard to environmental conservation. It will explain strategies and principles that have been proposed in *Our Common Future* to achieve Sustainable Development goals.[1] Sustainable Development is not seen by environmentalists as only a global environmental agenda but is also studied as 'global environmental ethics'. Therefore, it is important to examine the place of ethics and value systems in Sustainable Development. Does the concept of Sustainable Development adapt or belong to any ethical systems or it is a religion-free concept in common with many other policies today? This chapter will answer such questions as well as clarify the meaning of global environmental ethics.

In this regard, we will also examine the relationship of Sustainable Development and Environmental Ethics, hoping to justify the term 'global environmental ethics', which usually refers to the concept of Sustainable Development. Although Sustainable Development is considered as a UN conservation agenda item, scholars are still debating issues related to the concept. This chapter will explain briefly some of these issues in order to propose the most suitable stance in regard to environmental crisis. In the context of this research topic, however, the focus will only be on the role of religion in Sustainable Development. Finally, the discussion on the issue will be extended by viewing the Islamic perspective on Sustainable Development.

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[1] The World Commission on Environment and Development (WCED), *Our Common Future* (Oxford and New York: Oxford University Press, 1987).

3.1 The Concept of Sustainable Development

The global environmental awareness that was caused by the emergence of environmental ideologies in the 1970s inevitably initiated social reform, especially in the developed countries. The reformation sprang from the grassroots of society, and its impact was felt from consumerism to political practice (green politics). The awareness seems to be one of the mainsprings of modern society and has spread all over the world. In response to this awareness, the UN has taken immediate action by organising conferences where the issues of environment have been discussed seriously. The first was the United Nations Conference on Human Environment (UNCHE) in Stockholm between 5 and 7 June 1972.

In this conference, global issues of environmental degradation were discussed as a main topic.[2] According to Smith and Warr, the conference was a turning-point in establishing a global agenda to pay greater concern to environmental crisis.[3] Then, 26 principles and 109 suggestions related to the environment were declared at the end of the conference. In upholding the declaration of the Stockholm conference, the UN has established the United Nations Environmental Programme (UNEP) as a basis for formulating global environmental policy. Starting from this turning-point, many countries began to accomplish environmental programmes from education to regulation, which obviously increased environmental awareness or environmental literacy within their nations. In 1980, the International Union for Conservation of Nature (IUCN) published the World Conservation Strategy discussing the relationship

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[2] S. Sterling, "Rethinking Resource", in *The Environment in Question, Ethics and Global Issues*, ed. D. E. Cooper and J. A. Palmer (London: Routledge, 1992), 224.

[3] P. M. Smith and K. Warr ed., *Global Environmental Issues* (London: Hodder and Stoughton, 1991), 7.

between environment and development, pioneering the term 'Sustainable Development'.[4]

While environmental awareness was continuously growing, environmental issues once again influenced UN delegations in 1983, which led the Thirty-Eighth UN General Assembly to form the World Commission on Environment and Development (WCED). The commission consisted of 23 members and was led by Norway's Prime Minister, Gro Harlem Brundtland. Basically, their main task was to study comprehensively the impact of contemporary development on natural environment and to propose strategies for a better future. The commission held their first meeting from 1 to 3 October 1984 in Geneva and ended with a meeting from 23 to 28 February 1987 in Tokyo.

In the final meeting, WCED accomplished its duty by submitting a comprehensive report on environment and development. The report, named the Brundtland Report after the chief of commissioners, was submitted to the Forty-Second UN General Assembly in 1987. In order to make it available for public access, the report was then published as *Our Common Future*. This book proposes a blueprint for environmental conservation and economic growth to be applied by the global society to overcome environmental crisis. Sustainable Development is a new paradigm of development based on that blueprint, which not only emphasises environmental conservation but also humanity. *Our Common Future* is a key

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[4] The full title of the publication was *The World Conservation Strategy: Living Resources Conservation for Sustainable Development*. It was IUCN that popularised the term 'Sustainable Development' that was almost never been used before. See IUCN, *The World Conservation Strategy* (Gland: IUCN, 1980).

document and is considered as the most important text for a comprehensive understanding of Sustainable Development.[5]

There are two important episodes apart from the Brundtland Report, the United Nations Conference on Environment and Development (UNCED)[6] in 1992 in Rio de Janeiro, and the World Summit on Sustainable (WSSD) Development in 2002 in Johannesburg. Generally, UNCED became a platform for the world leaders, environmental scholars and environmentalists to discuss the future of world environment and development. Positively, the conference could be regarded as the world response to the Brundtland Report or the document of *Our Common Future*. Therefore, the Brundtland Report inevitably became the main ground for all discussion in this conference. UNCED then released world agendas to implement the concept of Sustainable Development such as the Rio Declaration on Environment and Development, Agenda 21 and the Statement of Forest Principles.[7]

On the basis of the Brundtland Report and UNCED, WSSD was set up in order to reinvigorate the agenda of Sustainable Development, especially Agenda 21, and to promote its practical implementation worldwide, rather than to generate yet more voluminous documents.[8] In other words, WSSD clearly focused on the implementation of strategies to achieve Sustainable Development.[9] In spite of these two episodes, the Brundtland Report and *Our Common Future* are still considered as the definitive documents, especially in explaining the concept of Sustainable

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[5] Luc Hens and Bashkar Nath, "Introduction and Acknowledgment", in The World Summit on Sustainable Development: The Johannesburg Conference, ed. Luc Hens and Bashkar Nath (Dordrecht: Springer, 2005), xxv.

[6] The conference was also informally named the Earth Summit.

[7] Luc Hens and Bashkar Nath, "Introduction and Acknowledgment", xxvi.

[8] *Ibid.*, xxvii .

[9] Jane Susan Roberts, *Environmental Policy* (London; Routledge, 2004), 187.

Development and its principles. It is also important, however, to look into certain documents produced by UNCED and WSSD pertaining to the concept and the principles of sustainable development, for instance, the 'General Framework of Islamic Agenda for Sustainable Development: Islamic Declaration on Sustainable Development' at the Johannesburg Summit.

3.1.1 Definition of Sustainable Development

Sustainable Development is a new concept of development that emphasises the integration of environmental conservation and economic growth. Previously, the concept of development was synonymous with economic growth, which can be quantified by certain parameters such as Gross Domestic Product (GDP). In fact, the concept of development has a wider meaning than the concept of growth because development means increase of quality of life while growth only emphasises increase of the economy.[10] According to Munn, the meaning of development in Sustainable Development refers to the quality enhancement of human and other spheres by achieving their basic needs.[11] Clearly, the concept of development here has a more comprehensive meaning than economic growth.

The concept of sustainability in Sustainable Development refers to preservation of natural resources that can fulfil current development goals and at the same time will not prevent future generations meeting their basic needs.[12] Inevitably the way we consume natural resources will determine sustainability. Natural resources must be

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[10] S. Schidheiny, *Changing Course: A Global Business Perspective on Development and Environment* (London: MIT Press, 1992), 2 .

[11] R. E. Munn, "Towards Sustainable Development: An Environmental Perspective", in *Economics and Ecology: Towards Sustainable Development*, ed. F. Archibugi, and P. Nijkamp (Dordrecht:Kluwer Academic Publications, 1989), 50.

[12] *Ibid.*, 50.

regarded as 'planetary capital', to be shared by all generations of humankind. Planetary capital refers to all these below:

a. Natural ecosystem that has an ability to absorb pollutions especially air pollutions without leaving any side-effects.

b. Limited stock of natural resources that cannot be renewed, which means once it has been consumed it will be gone forever.

c. Sum stock of natural resources that can be renewed with its ecosystem, that needs continuous efforts to renew as well as to conserve its ecosystem.

Our Common Future is amongst the most authoritative references for Sustainable Development. This work defines Sustainable Development as:

> ...development that meets the needs of the present without compromising the ability of future generations to meet their own needs.[13]

Based on this definition, Sustainable Development emphasises the concept of basic needs that must be met by everyone. Therefore development programmes should strive to provide these basic needs for current generations and not to demolish planetary capital that is important for future generations to meet their basic needs as

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[13] WCED, *Our Common Future*, 43.

well. Clearly Sustainable Development is an anthropocentric policy that considers human interest as the ultimate goal of development.

Our Common Future does not, however, reveal adequately the concept of needs, so it is open to various interpretations. What is the minimum level of needs that must be met by an individual, so that he/she will live securely? According to Beder, the concept of needs is relative, which means every society has their own concept of needs based on their culture and values, and the concept of needs changes in time.[14] Therefore, something that is considered as a basic need by one society is probably not so considered by another society; something that is considered as a basic need by current generations will perhaps not be so considered by future generations. Nevertheless, culture and values can determine the concept of needs and inevitably contribute to explaining Sustainable Development.

3.1.2 Principles of Sustainable Development

The concept of Sustainable Development that was proposed by WCED in *Our Common Future* clearly emphasises several strategies to conserve the environment. WCED, however, has not explained comprehensively which cultural system should be applied as a basis to make the concept value-added. Otherwise the concept will repeat modern religion-free approaches to overcome human crisis and prolong the isolation of culture and also religion in policymaking. In this context, Naess has made the interesting remark that Sustainable Development should include reverence for richness and diversity of human cultures and subcultures.[15] He adds that Sustainable Development today means development along the lines of each culture, not

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[14] Sharon Beder, *The Nature of Sustainable Development* (Newham: Scribe Publications, 1993), 3.

[15] Arne Naess, "Sustainable Development and Deep Ecology", in *Ethics of Environment and Development Global Challenge, International Response*, ed. J. Ronald Engel and Joan Gibb Engel (Tucson: The University of Arizona Press, 1990), 94.

development along a common centralised line.[16] Based on *Our Common Future*, generally the concept of Sustainable Development abides by the principles set out below:

a. Merging of Economic Growth and Environmental Conservation

In previous years it was almost impossible to merge economic growth and environmental conservation. Today humankind has no choice but to make an effort to merge economic growth and environmental conservation in whatever policies they make. Merging of economic growth and environmental conservation should be regarded as the ultimate goal in policymaking at every level whether by governments, cooperation or private sectors.[17]

b. Enhancement of Quality of Human Life

The ultimate purpose of development is to enhance the quality of human life, which includes every aspect related to human needs. In other words, the yardstick of development is not only quantitative measurement such as Gross Domestic Product (GDP) or per capita income, but also qualitative measurement such as satisfaction, comfort and safety. Thus, in my opinion, the quality of life includes many aspects beyond money matters, like meeting of basic needs, healthy environment, feel-good factors and also freedom of action.

c. Establishing of Social Justice

Social justice means everyone in a country has an equal right to share prosperity, which means s/he at least can meet her/his own needs to live. Wide

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[16] *Ibid.*, 95.

[17] WCED, *Our Common Future*, 62.

disparity in society is a very common symptom of social injustice, and should be avoided by establishing Sustainable Society. In order to achieve Sustainable Society, the programmes of development must be set to decrease poverty and to provide basic needs for targeted groups until they become self-dependent. In this context, WCED suggested that development has to meet the needs and aspirations of an expanding and developing world population.[18]

d. Conservation of Biodiversity and Ecological Equilibrium

Development should involve all efforts to conserve the biodiversity and ecological equilibrium on which humankind depends. Only by conserving biodiversity and ecological equilibrium, will there be a hope for current generations as well as future generations to fulfil their needs. Also it is important to preserve natural habitats and to protect endangered species in order to keep global ecosystems running in balance. Therefore everyone who is responsible for policymaking needs to be aware of the importance of diversity and ecological equilibrium.[19]

e. Optimisation of Natural Resources

Development needs to ensure the minimal use of natural resources to bring maximum benefit to humankind. Inevitably, this principle is very much needed in order to achieve Sustainable Development, as one of its goals is to enable future generations to meet their own needs. Therefore it is important to place a reasonable price upon natural resources by paying great concern to ecological and social impacts, not only economics.

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[18] *Ibid.*.54.

[19] *Ibid.*, 163-164.

f. Society and Individual Responsibility

Conservation as well as development should involve participation of each individual of a society. In other words, conservation is an individual's responsibility, not only to his/her society but also to global society. Similarly to this, each individual also has equal rights to gain benefits from 'planetary capital'. Indeed each individual is an environmental citizen with rights and responsibilities to the Earth, and thus should 'think globally and act locally'.[20]

Basically, this set of principles may provide an ethical axis to the concept of Sustainable Development. It is, however, almost impossible to distinguish between ethics and values, unless the concept of Sustainable Development is to be implemented in non-human being. Values are usually established by the culture and religion of a society. Therefore to link the concept of Sustainable Development with ethics is also to link the concept with values, which are related to the culture and religion of a society. Otherwise this set of principles will only be a guideline for developing the economy rather than a set of moral principles that can change the lifestyle of individuals and the worldview of society.

3.1.3 Strategies to Achieve Sustainable Development

The concept of Sustainable Development has been proposed in order to overcome the global environmental crisis that is worsening every day. The global society should discuss alternative strategies in order to ensure sustainability of global

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[20] "Think Globally Act Locally" is a popular phrase among environmentalists. The phrase was originated by Rene Dubos who proposed that environmental awareness should begin at home. See R. A. Eblen and W. Eblen, *The Encyclopedia of the Environment* (Boston: Houghton Mifflin Company, 1994).

environment. Before any action is taken, however, it is very important to identify what really happened to cause the crisis. In fact, WCED has revealed in the Brundtland Report six challenges faced by humankind as below:[21]

a. Population and Human Resources

For the last two centuries the world population has been growing exponentially. According to Pojman, 2000 years ago the world population grew very slowly at 300 million.[22] This number is very much smaller than the current world population, which is approximately 6.5 billion. Moreover, the current world population is growing at the rate of 1.8 per cent yearly, so that its number will increase 100 per cent in 39 years.[23] In other words, in the next 39 years the world population will increase to more than 11 billion if the current rate is unchanged. The most important cause is industrialisation, which started in Western Europe in the eighteenth century.

The world population inevitably will determine the amount of natural resources consumed by humankind. Basically, natural resources can be categorised into renewable resources and non-renewable resources. Renewable resources can be renewed, although it usually takes a long time. Non-renewable resources cannot be renewed, but some of the resources can be reused and recycled. Both renewable and non-renewable resources are limited, however, which means they can only support a certain number of the world population. The recent trend in world population as

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[21] *Ibid.*, 11-17.

[22] Louis P. Pojman, "Population: General Consideration", in *Environmental ethics: reading in theory and application*, ed. Louis P. Pojman (Boston: Jones and Bartlett Publishers, 1994), 241.

[23] *Ibid.*, 241.

shown by the above figure may greatly increase consumption of natural resources, so within the next few decades humankind will face a great crisis of natural resources.

b. Food Security: Sustaining the Potential

Nowadays most food supplies come from agriculture, although there are many innovations and inventions, especially in chemical engineering, which have been utilised to produce food. According to the Brundtland Report in *Our Common Future*, the amount of food supplies currently produced by the agricultural sector is the largest in the history of humankind.[24] Development of new technologies related to agriculture has been identified as a positive factor in increasing food supplies, besides expansion of demand from the growth of the world population. Some of the latest developments related to environmental issues will, however, threaten the potential of the agricultural sector to produce the same amount of food supplies for the world population in future. Environmental pollution, climate change and decrease in natural resources will affect global food supplies. Human activities are identified as the main factor causing these situations. The situations also include soil erosion, desertification and defertilisation that will directly affect agricultural activities.

When the Brundtland Report was submitted to the UN in 1987, actually some cases of starvation and malnutrition were still occurring in certain parts of the world, especially African countries. In the middle of 1988, the World Bank reported that the number of African populations suffering from malnutrition had increased and this crisis was set to continue.[25] Therefore global society needs to overcome the crisis before it spreads to other parts of the world. In order to avoid the crisis, they must

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[24] WCED, *Our Common Future*, 118.

[25] Lester R. Brown, C. Flavin and S. Postel, "Dunia Sedang Terancam", in *Dunia Terancam*, ed. Lester R. Brown. et.al. (Kuala Lumpur: INSAN, 1990), 85.

ensure all their activities will not affect the potential of the agricultural sector to supply food. They should also stop any activity that pollutes the environment and destroys the ecosystem because such activities will reduce the capability of the earth to produce food. Clearly, food security is an important challenge faced by the global society in Sustainable Development.

c. Species and Ecosystem: Resources and Development

Humankind cannot live on the Earth without interaction with other environmental components. The correlation among environmental components yields equilibrium in the global ecosystem. Actually, the diversity of habitat, species and genetics, which is commonly known as Biodiversity, helps to establish self-reliance. Thus, Biodiversity is the most precious planetary capital for humans to gain their resources. Without such resources, humans can hardly meet their needs or achieve Sustainable Development. In other words, humans still need other environmental components for their survival even though they have recently reached a very advanced stage in terms of science and technology.

Recently, human activities such as deforestation have had massive impacts on the equilibrium of the global ecosystem. Among those impacts are species extinction and habitat alteration. According to the Brundtland Report, more than half of the Earth's species live in tropical rain forests, although the forests cover only 6 per cent of the Earth's land.[26] Therefore, continuous deforestation in the tropical rain forests will lead to massive species extinction and habitat alteration in the global ecosystem as a whole. Because deforestation demolishes a variety of habitat, almost 20 per cent

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[26] WCED, *Our Common Future,* 151.

of fauna and flora are now extinct.[27] Obviously, the issues of species extinction and habitat alteration will affect future global development and also threaten the ability of humans to meet their basic needs.

d. Energy: Choices for Environment and Development

Energy is needed by humans for their daily life. Humans need energy for their survival, from the simple individual things like cooking to complex state development through activities like manufacturing. Nowadays, the energy consumed by the global society mostly come from fossil (carbon) fuels including oil, natural gas and coal, which are categorised as non-renewable resources. Among the fossil fuels, oil will dry up earlier than natural gas and coal. WCED suggest that oil production will level off by the early decades of the twenty-first century, and then gradually fall.[28] Therefore, depending on fossil fuels is not a bright solution, so humans have to seek alternative energy that is renewable in order to avoid an energy crisis.

Moreover, consuming fossil fuels inevitably will increase pollution risks by producing more carbon dioxide (CO_2) in the atmosphere. According to Flavin, CO_2 produced by the burning of fossil fuels contributes 40 per cent of 'Greenhouse' gases that cause global warming.[29] Clearly, finding an alternative energy is a great challenge for the current generations for future survival. The alternative energy should be renewable, so that it will ensure sustainability of energy supplies. Besides being renewable, the alternative energy should be safe, which means low pollution risks.

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[27] E. C. Wolf, "Cegah Pemupusan Spesis yang Berleluasa", in *Dunia Terancam*, ed. Lester R. Brown. et.al. (Kuala Lumpur: INSAN, 1990), 25.

[28] WCED, *Our Common Future*, 174.

[29] Christopher Flavin, "Dunia Semakin Panas", in *Mengenai Isu-isu Alam Sekitar Dunia*, ed. Lester R. Brown (Kuala Lumpur: Pan Asian Business Service, 1994), 41.

There are some alternative energy forms that probably can replace fossil fuels in future such as wind, wave, tidal, solar and falling water. In order to produce such alternatives we will definitely need advanced technologies, so that a great effort should be made by global society towards it.

e. Industry: Producing More with Less

Nowadays, industry is agreed to be at the heart of global development and plays a major role in global economics. This sector produces goods for human daily needs and also provides home comforts. The recent trend of the world population inevitably will increase demand for goods and services, so that the world will have to multiply its industrial activities. In 1987, the WCED reported that the global society had produced seven times more goods than they did as recently as 1950.[30] The rapid development of industry means more consumption of natural resources and also energy. Therefore, uncontrolled industry will cause natural resources to be extinct more quickly as well as producing more pollution in the environment.

The industrial sector has a strong relationship with consumerism or demand force. Many essential human needs can be met through goods and services provided by industry.[31] Consumerism or demand force in free market systems, however, usually is not based on what people really need, but on what people want. Consumerism or demand force is no longer driven by necessities, but by commercial campaigns through the advertisement sector. Because of the 'artificial needs', humankind inevitably will consume more natural resources and raw materials than they really need. Industrialisation indeed involves a chain or cycle that arranges the

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[30] WCED, *Our Common Future*, 15.

[31] *Ibid.*, 206.

relationships between producer and consumer. Therefore, the industrial sector will be responsible for massive consumption of natural resources, unless action is taken to refine the concept of needs.

Apart from encouraging massive consumption of natural resources, the industrial sector may also pollute the environment. The industrial sector is responsible for producing environmentally non-friendly or hazardous products such as non-disposable products, for example, plastic and toxic products like pesticide. Perhaps the Bhopal Tragedy in 1984, when chemical gases leaked from a pesticide factory, could be considered as the best example related to this issue. The tragedy resulted in almost 8000 people dying during the first week of the tragedy, and about 100000 people have suffered from permanent injuries.[32] The Bhopal tragedy revealed a strong proof that environmentally non-friendly and hazardous product produced by industry might threaten not only human survival but also the environment. Therefore, industry issues can be regarded among the crucial challenges faced by global society in achieving Sustainable Development.

f. The Urban Challenge

The Industrial Revolution that started in the late eighteenth and early nineteenth centuries in Western Europe has changed world demography. Since that period, continuous industrialisation has been transforming rural societies into urban societies, especially in developed countries. WCED predicted that by the turn of the twentieth century, almost half of humanity would live in urban centres and the world

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[32] The Bhopal tragedy is seen as the worst chemical industrial disaster in history. The exact figures for death toll and injuries vary. See Ingrid Eckerman, *The Bhopal Saga Causes and Consequences of the World's Largest Industrial Disaster* (Hyderabad: Universities Press, 2005), 5.

of the twenty-first century will be a largely urban world.[33] The urbanisation has resulted in a massive migration from rural to urban areas, especially to the world's big cities like London, Paris, New York and Tokyo.[34] According to WCED, over only 65 years the developing world's urban population had increased from around 100 million in 1920 to 1 billion in 1985.[35] Such trends of urbanisation will cause not only demographical changes but also environmental degradation.

The effects of urbanisation on environmental qualities are air pollution, water pollution, sound pollution, drainage problems, sewerage problems and solid waste problems.[36] Certainly, high density of population in a city will cause an 'extreme burden' on the capability of the environment to support that population. It also generates more competition within the urban society that leads to unlimited exploitation of the natural resources. Such a situation inevitably changes the natural landscape and may destroy the environment. Moreover, urbanisation may also contribute to global warming, as the increase of greenhouse gases produced by vehicles and factories in cities can also increase the global temperature.[37] Thus, urbanisation is considered by WCED as among the challenges to the process of achieving Sustainable Development.[38]

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[33] WCED, *Our Common Future*, 16.

[34] Zaini Ujang, *Environmentalisme Dalam Tata Baru Dunia* (Kuala Lumpur: IKD, 1992), 121.

[35] WCED, *Our Common Future*, 16.

[36] Ujang, *Environmentalisme Dalam Tata Baru Dunia*, 121.

[37] Diana Mitlin and David Satterthwaite, "Sustainable Development and Cities", in *Sustainability, the Environment and Urbanization*, ed. Cedric Pugh (London: Earthscan, 1996), 47.

[38] WCED, *Our Common Future*, 16-17.

In fact, all the challenges that were revealed by WCED in *Our Common Future*' had been discussed at the Earth Summit in Rio de Janeiro in 1992. In my opinion, these challenges repeated the similar alerts that had been revealed by a group of MIT researchers in *The Limits to Growth* in 1972. Inevitably, these challenges demand a greater attention from global society to find better ways towards conservation. In order to face these challenges and also to achieve the purposes of Sustainable Development, WCED proposed seven strategies in *Our Common Future* as explained below:[39]

a. Reviving Growth

This strategy emphasises the importance of economic growth in solving human crisis related to poverty. *Our Common Future* stated that a large number of people is still categorised as poor who live in absolute poverty, especially in Africa and Asia.[40] The report explained further that such poverty reduces their capacity to use resources in a sustainable way, which inevitably intensifies pressure on the environment.[41] Because of the poverty, they have no choice but to exploit the natural resources in order to gain their basic needs. Therefore, growth must be revived especially in developing countries in order to alleviate the poverty and it indirectly will sustain the stock of natural resources. According to Cobb, however, the WCED's proposal is idealistic in assuming that by alleviating poverty the unsustainable pressures on the environment will be discontinued.[42] He argues that even if the poor

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[39] WCED, 49-65.

[40] *Ibid.*, 49

[41] *Ibid.*, 49.

[42] John B. Cobb, Jr., "Toward a Just and Sustainable Economic Order", in *Environmental Ethics An Anthology*, ed. Andrew Light and Holmes Rolston III (Malden: Blackwell, 2003), 365.

can meet their basic needs, the pressures on the environment will probably still continue.[43]

b. Changing the Quality of Growth

WCED proposed that Sustainable Development involves more than growth, as it requires a change in the content of growth to make it less material.[44] The changes are needed because the contemporary concept of development always refers solely to economic achievements and quantitative values, whereas the concept of development should include social achievements such as economic justice and human rights, and also qualitative values such as caring society and environmental beauty. In Sustainable Development, everyone has the right to live in harmony with nature, so that economic activities should not destroy natural resources and disrupt their balance. Certainly, this is the meaning of quality of life, which also involves social development besides economic growth.

c. Meeting Essential Needs

The concept of Sustainable Development obviously emphasises the satisfaction of human needs not only for present generations but also for future generations.[45] In this regard, WCED suggested that the concept of needs refers to essential needs or basic needs including employment, food, energy and settlement.[46] A large number of people in developing countries today still live without enough essentials and that will threaten their survival and will lead to human crises like

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[43] *Ibid.*, 365.

[44] WCED, *Our Common Future*, 52.

[45] *Ibid.*, 43.

[46] *Ibid.*, 54-55.

starvation and malnutrition. Such situations may become worse if the world population maintains the current unsustainability trend. Therefore, this strategy can be regarded as the most important one as it is directly related to the main purpose of Sustainable Development.

d. Ensuring a Sustainable Level of Population

Population growth is always considered as a big issue among environmentalists, as most of them assume it can threaten the planetary capitals. This issue actually has been debated probably since Malthus proposed his theory of population growth in the context of food supply. In our time, the debate was revived by Hardin in his article 'The Tragedy of the Commons' and followed by the MIT researchers' report *The Limits to Growth.* WCED apparently acknowledged the polemic as the Brundtland Report said that the issue is not simply one of global population size.[47] Perhaps Attfield's opinion can be considered as the moderate one, as he suggests that the neo-Malthusian environmentalist paradigm is not absolutely true, although he certainly agrees that population policies are needed.[48] Therefore, population policies do not mean to restrict population growth, but to ensure the growth is compatible with sustainability.

e. Conserving and Enhancing the Resource Base

Indeed, if needs are to be met as targeted by the concept of Sustainable Development, the Earth's natural resource base must be conserved and enhanced.[49] As

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[47] *Ibid.*, 55.

[48] Robin Attfield, "Saving Nature, Feeding People and Ethics", in *Environmental Ethics An Anthology*, ed. Andrew Light and Holmes Rolston III (Malden: Blackwell, 2003), 466-470.

[49] WCED, *Our Common Future*, 57.

mentioned before, however, industrialisation has resulted in an increase of consumption, and it will directly cause an increase of demand for natural resources. WCED suggested some approaches, for instance, by widening people's options to earn sustainable livelihoods, increasing productivity in agriculture, utilising renewable energy resources and preventing environmental pollution.[50] Clearly, the decrease of natural resources will threaten future development. The conservation of natural resources should be viewed beyond development goals, however, because it is indeed part of human moral obligation to other living beings and future generations.[51]

f. Reorienting Technology and Managing Risk

The reorientation of technology and the management of environmental risk is another important strategy to achieve Sustainable Development. According to WCED, the strategy involves two approaches; first, enhancement of technology in developing countries so that they can respond more effectively to the challenges of Sustainable Development and, second, technology development must pay greater attention to environmental factors.[52] In response to this strategy, new concepts of technology have been suggested, such as Green Technology, Intermediate Technology, Appropriate Technology and Soft Technology. Such concepts of technology are, however, closely related to environmental risk. For instance, applying nuclear technology as an alternative to carbon fuel may also bring another risk to the environment. Therefore, the strategy emphasises both reorientation of technology and management of risk.

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[50] *Ibid.*, 57-60.

[51] *Ibid.*, 57.

[52] *Ibid.*, 60.

g. Merging Environment and Economics in Decision-Making

Inevitably, all the previous strategies to achieve Sustainable Development need to be implemented as national or international policies. Thus, the common theme throughout these strategies is the need to integrate economic and environmental considerations in decision-making.[53] In the past, most development policies merely considered economic factors, so that the policies led to environmental degradation. Even at that time, economic and environmental concerns were usually considered in opposition. Because of the environmental crisis, however, it is necessary now to merge economic and environmental factors in every level of decision-making. The merger not only involves national policies established by state government but also corporate and business policies established by other smaller bodies like local authorities and companies.

3.2 Ethics of Sustainable Development

Over the last three decades, Sustainable Development has been influencing human activities in social or economic terms. Political leaders and policymakers always take Sustainable Development into account when they establish economic and social policies. In other words, through the implementation of such policies, Sustainable Development has indirectly been applied to managing human activities at every level of society. According to Barr, ethics is among the key factors determining people's attitudes towards Sustainable Development.[54] Sustainable Development is not a manual guide for machines, but it is so for humans who live together with other creatures on the Earth. Because Sustainable Development deals with humans, it is

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[53] *Ibid.*, 62.

[54] Stewart Barr, *Environment and Society: Sustainability, Policy and the Citizen* (Aldershot, Hampshire: Ashgate Publishing), 31-33.

almost impossible to understand it without discussing the importance of ethics.[55] Therefore, ethics plays a great role in achieving Sustainable Development goals.

Furthermore, Sustainable Development is implemented for the purposes of solving social problems, especially pertaining to the environment. Therefore, according to Muschett, ethics are important in Sustainable Development because the concept relates to many social problems.[56] In fact, most social problems relate to ethical issues such as human values, human duties and human character, and such problems inevitably cannot be disassociated from ethics. The five challenges proposed by the Brundtland Report as explained before clearly relate to ethical issues. For instance, the first challenge pertaining to population and human resources obviously involves human values and human duties in justifying the problems as well as in making fair decisions.

Even Sustainable Development apparently can be seen to replace the role of traditional ethics in guiding human conduct upon the environment. According to Bosselmann, Sustainable Development itself can be regarded as an ethical concept.[57] He adds that the late commitment to acknowledge the role of Sustainable Development as an ethical concept could be read as an admission of failure.[58] Engel had already argued this, however, when he responded to Brundtland's claim that

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[55] F Doughlas Muschett, "An Integrated Approach to Sustainable Development", in *Principle of Sustainable Development*, ed. F Doughlas Muschett (Delray Beach: St Lucie Press, 1997), 8.

[56] *Ibid.*, 9.

[57] Klaus Bosselmann, "Ethical Implication", in *The Law of Energy for Sustainable Development*, ed. Adrian J Brandbrook, Rosemary Lyster, Richard L. Ottinger and Wang Xi, (New York: Cambridge University Press, 2005), 78.

[58] *Ibid.*, 78.

Sustainable Development could be elevated as global ethics.[59] Thus, according to Engel, Brundtland's claim can be regarded as a call for a new holistic ethics or a hope for making Sustainable Development a matter of moral obligation.[60]

Perhaps Engel's comment is right because as a new holistic ethics, Sustainable Development needs at least its own ethical judgment, values system and moral obligations. In this sense, if the concept of Sustainable Development does not represent any school of thought in ethics, then it can be considered as a new school of thought. Although the concept of Sustainable Development may not independently stand on its own theory of ethics, at least it can be regarded as one of the theories of Environmental Ethics. As discussed in chapter two, Environmental Ethics is already considered as a new discipline of ethics, or maybe as a model of applied ethics, and the concept of Sustainable Development contributes one of its theories. Probably this is the best answer to the question 'where is the position of Sustainable Development in ethics"?

3.2.1 Sustainable Development as Global Environmental Ethics

Although Sustainable Development has been declared as a global agenda pertaining to environment, the possibility to elevate it to a global Environmental Ethics is still uncertain. After the Brundtland Report, the UN has striven to promote Sustainable Development to be conceded not only as a global policy of development but also as a global Environmental Ethics. Engel noted that Gro Harlem Brundtland, the Norwegian Prime Minister, had called for 'a new holistic ethics in which

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[59] J. Ronald Engel, "Introduction: The Ethics of Sustainable Development", in *Ethics of Environment and Development: Global Challenge and International Response*, ed. J. Ronald Engel, Joan Gibb Engel (Tucson: The University of Arizona Press, 1990), 1-2.

[60] *Ibid.*, 2.

economic growth and environmental protection go hand in hand around the world', when she opened the 1988 World Conference on the Changing Atmosphere.[61] As she was the chairman of WCED, her remark could be seen as the voice of the commission that chaired and perhaps represented the hope of the UN.

Before Sustainable Development can be regarded as a global Environmental Ethics, however, it inevitably has to respond to some ambiguous issues such as its tendency towards human-centred values. In this regard, Naess apparently disagreed with the concept of Sustainable Development because of its shallow concern for non-human values.[62] In fact, Sustainable Development is a human-centred policy, as has been endorsed in the Rio Declaration.[63] As the founder of Deep Ecology, Naess will naturally oppose such concepts of human-centred policy as Sustainable Development. As discussed in chapter two, however, environmental ethics also includes human-centred values as one of its theories apart from bio-centred values and eco-centred values. Therefore, the concept of Sustainable Development can be regarded as a stream in Environmental Ethics.

Perhaps the concept of Sustainable Development is inadequate to be acknowledged as an ethical concept like other theories of ethics such as Utilitarianism and Egoism. Engel raised an important question in this respect:

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[61] *Ibid.*, 1.

[62] Arne Naess, "Sustainable Development and Deep Ecology", in *Ethics of Environment and Development: Global Challenge and International Response*, ed. J. Ronald Engel, Joan Gibb Engel (Tucson: The University of Arizona Press, 1990), 89-90.

[63] Lawrence Wai-Chung Lai and Frank T. Lome, "Implementing Sustainable Development: Institutional Features", in *Understanding and Implementing Sustainable Development*, ed. Lawrence Wai-Chung Lai and Frank T. Lome (New York: Nova Science, 2003), 2.

> More importantly, if we are morally serious, we must know on what grounds it may be said that Sustainable Development is a true ethics for human beings on planet Earth.[64]

Such a question probably queries the capability of Sustainable Development to be an ethical theory because of its ambiguous ground. It is, however, too early to justify the capability of Sustainable Development because the concept is still new compared with Utilitarianism and Egoism. Most importantly, the concept of Sustainable Development can be acknowledged as a theory of Environmental Ethics like Deep Ecology, Eco-Feminism, Eco-Socialism and Animal Rights.

Like other theories of Environmental Ethics, Sustainable Development has its own theory of values and theory of duties. To be a global Environmental Ethics, however, the concept of Sustainable Development has to be associated with various backgrounds of the global society. In the other words, global societies should all together acknowledge the ethical principles upheld by Sustainable Development, or at least assimilate it into their existing ethical system. According to Bosselmann, it is important to take the search for globally-shared ethics seriously in order to achieve the objectives of Sustainable Development.[65] Perhaps, globally-shared ethics should be either the global society upholding the same ethical system that is the concept of Sustainable Development or assimilating the common principles of the concept into various backgrounds of the world's ethical systems.

Calling on the global society to uphold the same ethical system is an easy one. According to Naess, Sustainable Development should mean development along the

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[64] Engel, "Introduction: The Ethics of Sustainable Development", 1.

[65] Bosselmann, "Ethical Implication", 84.

line of each culture, not along centralised lines.[66] Naess's opinion clearly opposes the latter because every nation already has a culture that also includes an ethical system. For Bosselmann the global society should uphold a globally-shared ethics, and he suggests the relevant principles and values can reliably be found in the Earth Charter launched in 2000 (see appendix 1).[67] The Charter, that was convened as a follow-up to the Rio Declaration, called for a shared vision of basic values to provide an ethical foundation for the global society.

In fact, the Earth Charter's prescription of human obligations towards nature was not a new one. In 1982, the World Charter for Nature (see appendix 2) had been released and adopted formally as a resolution of the UN General Assembly.[68] The World Charter for Nature speaks similarly to the Earth Charter about environmental conservation. From a religious perspective, however, both the Earth Charter and the World Charter for Nature prolong the polemic between secularism and religion because religion is excluded from both. In other words, if the Charters become the ethical ground for Sustainable Development, it means religions have no significant role in this global Environmental Ethics. Therefore, the second option, that is, to assimilate the common principles of Sustainable Development into various backgrounds of the world ethical systems is probably more realistic.

3.2.2 Sustainable Development as Practice of Environmental Ethics

Regardless whether the concept of Sustainable Development can stand independently as an ethical system or be assimilated into various backgrounds of the

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[66] Naess, "Sustainable Development and Deep Ecology", 95.

[67] Bosselmann, "Ethical Implication", 84.

[68] Alan E. Bayle, "The Rio Convention on Biological Diversity", in *International Law and the Conservation of Biological Diversity*, ed. Catherine Redgwell and Michael Bowman (London: Kluwer Law International, 1996), 34.

world ethical systems, as has been mentioned before, the concept is considered by all parties as a theory of Environmental Ethics. Apart from a theory of Environmental Ethics, UN has endorsed the concept of Sustainable Development during the Earth Summit in Rio de Janeiro to be implemented as a global agenda for development. The connotation of 'a global agenda for development' means the concept of Sustainable Development will be practised as a policy of development in all countries. Because Sustainable Development is considered to be a branch of Environmental Ethics, the theory of Environmental Ethics (that refers to Sustainable Development) will also be practised as a policy of development.

On the basis of such argument, Sustainable Development can be regarded as among the practices of Environmental Ethics. As discussed in sub-topic 2.4 chapter two and illustrated in figure 2.2, the practice of Environmental Ethics refers to the transformation of its theory into individual lifestyle, professional codes, written regulations, policy of development and state ideology. In this regard, the concept of Sustainable Development has been practised at least as a policy of development so it can be regarded as the practice of Environmental Ethics. Moreover, the concept of Sustainable Development has also been taken into account in establishing professional codes, written regulations and even state ideology. Therefore, Sustainable Development clearly represents the practical dimension of Environmental Ethics.

As a result, the term 'Sustainable' has been used to describe the awareness of every sector towards environmental conservation. For instance, the term 'Sustainable Economics' is used to describe an alternative to classical market-based economics that offers a different way to think about economics in the sense of environmental awareness.[69] Another example is the term 'Sustainable Fisheries', used to describe the

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[69] Jardins, *Environmental Ethics An Introduction to Environmental Philosophy*, 60.

management of marine resources in the light of the impact of human exploitation of marine species and their habitat.[70] In the same vein of environmental awareness, the term 'Sustainable' has been used in other sectors such as management, agriculture and forestry. Therefore, in the context of this research, Sustainable Forestry has been chosen to illustrate the practical dimension of Environmental Ethics, and will be discussed further in chapter four.

3.3 Where is Religion in Sustainable Development?

As discussed earlier in sub-topic 3.2.1, the second approach to transform the concept of Sustainable Development into a global Environmental Ethics is by assimilating the common principles of the concept into various backgrounds of the world's ethical systems. In this regard, religion can be seen as one of the most authoritative ethical systems that is still practised by most of the world's communities. In other words, the second approach clearly demands a role for religion to meet the requirements of becoming a global Environmental Ethics. Most societies today still practise their religion at least nominally and also uphold their religious teachings that also contain the doctrine of cosmology and worldview pertaining to the environment.

In fact, Sustainable Development is a religion-free concept that is open to various religious interpretations. According to Walde, however, given its values, Sustainable Development could be considered as a secular version of Protestant ethics.[71] Actually, Walde's argument is strongly influenced by the Weber thesis that

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[70] R. Rayfuse and M Wilder, "Sustainability, Uncertainty and Global Fisheries", in *Ecology, Uncertainty and Policy: Managing Ecosystem for Sustainability*, ed. J. W. Handmer, T. W. Norton and S. R. Dovers (Harlow: Pearson Education, 2001), 141.

[71] Thomas W. Walde, "Natural Resources and Sustainable Development: From Good Intentions to Good Consequences", in *International Law and Sustainable Development: Principles and Practice*, ed. Nico Schrijver and Friedl Weiss (Leiden: Martinus Nijhof, 2004), 124.

the rise of Western countries was rooted in the Protestant faith.[72] In this context, Walde suggests:

> It is no wonder that the persistent need for an all-explaining religion revives in the form of secular belief value system deeply rooted in traditions formerly supported by religion.[73]

Walde's suggestion is that the role of religion is still needed although it should be in the form of secular belief value systems. Therefore, whether Sustainable Development is a religion-free concept or a secular version of Protestant ethics, both acknowledge the role of religion in elevating Sustainable Development as a global Environmental Ethics.

3.3.1 The Role of Religion in Sustainable Development

In the Brundtland Report, the role of religion in Sustainable Development has not been expressed except by the call for the application of traditional ecological knowledge in modern societies.[74] Perhaps it also includes religious ecological knowledge. Once again, religion was almost ignored in the Earth Summit at Rio de Janeiro, in 1992. Religion is mentioned nowhere in UNCED's documents except under the broad theme of traditional ecological knowledge and indigenous culture. Only at the Johannesburg Summit in 2002 did the role of religion receive attention.

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[72] The Weber thesis was widely discussed in the twentieth century, and as usual there were pros and cons. In the context of this research, however, it is not necessary to decide which argument is more acceptable. See Malcom H. Mackinnon, "The Longevity of the Thesis: A Critique of the Critics", in *Weber's Protestant Ethic: Origin, Evidence, Context*, ed. Hartmut Lehmann and Guenther Roth (New York: Press Syndicate of the University of Cambridge, 1995), 211–212.

[73] *Ibid.*, 124.

[74] WCED, *Our Common Future*, 12.

Krapivin and Varotsos noted that the spiritual dimension of Sustainable Development was only discussed at the WSSD, where the focus on the spiritual dimension of human reality was made.[75]

The WSSD's concern indicates that religion has an important role in achieving Sustainable Development goals, and thus it was taken into account by the Johannesburg Summit.[76] In this regard, Krapivin and Varotsos suggested that religion plays a great role in explaining the most basic issues related to Sustainable Development such as:[77]

a. How we understand the world in which we live and our place in the world

b. How traditional concerns and beliefs of religion can be related to scientific understanding

c. How the joint reflection of theologians, scientists and other scholars can contribute to the welfare of human community.

Actually, most of these issues pertain to the worldview, so that the role of religion is merely to support the implementation of Sustainable Development. Perhaps religion can contribute more than supporting arguments, however, because it persistently remains in the heart of people. In other words, it is the internal will that can motivate people to accomplish an obligation.

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[75] Vladimir F, Krapivin and Kostas A. Varotsos, *Globalization and Sustainable Development: Environmental Agendas* (Chichester: Praxis Publishing, 2007), 29.

[76] *Ibid.*, 30.

[77] *Ibid.*, 30.

Therefore, religion can be used to bend human will to uphold Sustainable Development agendas. In this context, Taylor suggested that people around the world, despite diverse and sometimes mutually exclusive religious worldviews and national interests, might unite to express and act upon a religious fidelity to the biosphere.[78] In order to achieve this goal, religious scholars should be invited to propose the religious perspective at every important dialogue and meeting in which discussion on Sustainable Development takes place. In fact, the religious perspective has only been taken into account in the Johannesburg Summit, which was almost fifteen years after the Brundtland Report. Actually, the religious perspective has contributed to theories of Environmental Ethics since the 1960s, but it has only been formally invited to do so after three decades.

Religion can also enhance the concept of Sustainable Development by enriching it with sacred values which can only be found in religion and traditional belief. According to Bosselmann:

> Contemporary Western legal theories of justice all suffer from avoiding the moral debate. That is why no legal theory has ever addressed ecological justice. And yet the ethics of Sustainable Development demand no less than the recognition that the environment is of intrinsic value.[79]

In Bosselmann's opinion, intrinsic values are very important to Sustainable Development in order to bring justice not only for human beings, but also to other

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[78] Bron Taylor, "Religion and Environmentalism in America and Beyond", in *The Oxford Handbook Book for Religion and Ecology*, ed. Roger S. Gottlieb (Oxford: Oxford University Press, 2006), 604.

[79] Bosselmann, "Ethical Implication", 83

beings. Perhaps, sacred values have greater impact than intrinsic values because they contain an extra spiritual dimension. These issues will be discussed further in chapter four in relation to Sustainable Forestry, and also in chapter six, which focuses on the Islamic perspective with special reference to *Ḥarīm* and *Ḥimā*.

3.3.2 Sustainable Development from the Islamic Perspective

Similarly to Environmental Ethics, the concept of Sustainable Development has attracted many Muslim scholars from various disciplines to respond by suggesting the Islamic perspective. Among the first Muslim scholars who directly responded to the concept of Sustainable Development was Ansari, when he published an article in 1994 entitled 'Islamic Perspective on Sustainable Development'.[80] Some Muslim scholars, however, responded indirectly to the concept of Sustainable Development rather earlier than Ansari, for instance, Izzi Dien, who discussed the sub-theme 'The Sustainable Care of Nature' pertaining to the concept of sustainability in his article in 1990.[81] Other Muslim scholars who also responded to this issue were Hassan, Chachi, Sadeq and Murinde in 'The Role of Islamic Financial Institution in Sustainable Development'[82] and also Hasan in 'Sustainable Development from an Islamic Perspective: Meaning, Implications and Policy Concern'.[83]

Basically, Islam does not oppose the concept of Sustainable Development, because among the objectives (*maqāṣid*) of *Sharī'ah* is the meeting of human needs

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[80] Mohamed I. Ansari, "Islamic Perspective on Sustainable Development", *American Journal of Islamic Social Sciences*, Vol. 11, No. 3 (1994), 394-402.

[81] Izzi Dien, "Islamic Environmental Ethics: Ethics, Law and Society", 193–195.

[82] Abul Hassan, Abdel Kader Chachi, A. M Sadeq and V. Murinde, "The Role of Islamic Financial Institutions in Sustainable Development", in *Islamic Finance and Economic Development*, ed. Munawar Iqbal and Ausaf Ahmad (Basingstoke: Palgrave MacMillan, 2005), 59 - 82

[83] Zubair Hasan, "Sustainable Development from an Islamic Perspective: Meaning, Implications and Policy Concern", *JKAU: Islamic Econ.*, 19(9) (2006): 3-18.

for current and future generations, just like the purposes of Sustainable Development.[84] According to Izzi Dien, in order to achieve these objectives Islam permits the utilisation of natural resources but the use must not involve unnecessary destruction.[85] In ensuring sustainability, the natural resources that produce life's essentials have to be protected so that their utilisation may continue in a sustainable way.[86] Therefore, as regards the purposes of Sustainable Development, Islam shares the same intentions to secure human needs and at the same time to conserve the environment. Actually, the whole Islamic system of life including economics and law is intended to secure both purposes.

The most important question regarding this issue is, however, what the suitable ground or base for the implementation of Sustainable Development in Muslim countries may be? The concept of Sustainable Development actually evolved in the paradigm of Western economics. Therefore, there are some alternative definitions for Sustainable Development suggested, for instance, by the World Wide Fund for Nature (WWF), which is quite different from WCED's definition.[87] Perhaps Hasan is right when he says there is no agreed definition of Sustainable Development.[88] For that reason, Muslim scholars strive to suggest an Islamic perspective for Sustainable Development that at least can be applied in Muslim countries.

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[84] *Ibid.*, 8.

[85] Izzi Dien, "Islamic Environmental Ethics: Ethics, Law and Society", 193.

[86] *Ibid.*, 194.

[87] Safei-Eldin A Hamed, "Capacity Building for Sustainable Development: The Dilemma of Islamization of Environmental Institutions", *in Islam and Ecology: A Bestowed Trust*, ed. Richard C. Foltz, Frederick M. Denny and Azizan Baharuddin (Cambridge: Center for the Study of World Religion, Harvard Divinity School, 2003), 405.

[88] Hasan, "Sustainable Development from an Islamic Perspective: Meaning, Implications and Policy Concern", 5.

In this regard, Hamed concluded that Muslim scholars' proposals to achieve Sustainable Development in Muslim countries involves two tasks: first, the implementation of an Islamic economic system and, second, the revitalisation of the traditional resources management institutions of Islam such as *Ḥisbah*, *Waqf*, *Ḥarīm* and *Ḥimā*.[89] Positively, Hamed's conclusion is parallel with the second approach of elevating Sustainable Development to a global Environmental Ethics, as discussed before, which is the assimilation of the common principles of Sustainable Development into various backgrounds of the world ethical systems. Therefore, the best way to implement Sustainable Development in Muslim countries is to establish an Islamic economic system and revitalise the traditional environmental institutions of Islam.

In the Johannesburg Summit, Muslim countries were privileged to propose their framework for and perspective on Sustainable Development. In order to formulate Islamic proposals, the first Islamic Conference of Environment Ministers was held in Jeddah, Saudi Arabia, between 10 and 12 June, 2002.[90] The conference concluded with a declaration entitled 'General Framework of Islamic Agenda for Sustainable Development' (see appendix 3), intended for presentation at the Earth Summit in Johannesburg.[91] The declaration consists of twelve themes: Economic Growth, Poverty Eradication, Population and Urban Development, Health and Environment, Natural Resources, World Trade and Globalisation, Legal and Institutional Aspects of Environment, Involvement of Civil Society, Awareness-

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[89] Hamed, "Capacity Building for Sustainable Development: The Dilemma of Islamization of Environmental Institutions", 409.

[90] J Donald Hughes and Mark R. Stoll, *The Mediterranean: An Environmental History* (Santa Barbara: ABC-CLIO, 2005), 163.

[91] *Ibid.*, 163

Raising, Education and Informative Programmes, Achieving Peace and Security, and finally Funding. This proposal has been presented to the Johannesburg Summit as Background Paper No. 5 entitled 'General Framework of Islamic Agenda for Sustainable Development: Islamic Declaration on Sustainable Development'.

The proposal, however, simply repeats much of what has been proposed by the Brundtland Report. Most of its content recalls Sustainable Development agendas that already exist in previous documents. Perhaps the difference between the Islamic proposal and those documents is that the former was prepared by Muslim countries, while the latter were prepared by the UN and its agencies. The Islamic proposal apparently does not recognise the Muslim scholars' responses on Sustainable Development, as revealed in this chapter earlier. In fact, both approaches proposed by Muslim scholars, as Hamed suggests, should be useful to enrich the Islamic proposal with the Islamic paradigm of development.

For instance, the 'Involvement of Civil Society' in the Islamic declaration only suggests the following aspects are of concern:[92]

a. Encouraging involvement of civil society in the elaboration and implementation of strategies and plans destined for Sustainable Development and environmental protection.

b. Encouraging the establishment of civil society organisations and drawing up legislation promoting their participation.

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[92] See appendix 3.

It is almost repeats the agendas that already exist in previous documents of Sustainable Development such as the Rio Declaration and Agenda 21. In fact, from an Islamic perspective, the involvement of civil society in environmental conservation is considered as part of *Ḥisbah*, and contemporary Muslim scholars in responding to environmental issues have discussed it widely. In this regard, Izzi Dien observed:

> Firstly, Hisbah operates as an individual response to reform error and establish good. According to this, any member of society is entitled to remonstrate against evil and encourage right actions as long as they are able to do so within the law.[93]

Izzi Dien's explanation clearly proposes the role of *Ḥisbah* in establishing civil society pertaining to environmental conservation. This, however, is almost absent from the 'General Framework of Islamic Agenda for Sustainable Development'. It can only be found in two places; in 'Legal and Institutional Aspects of Environment' and in 'Awareness-Raising, Education and Information Programmes'. In the former theme, one of the suggestions is:[94]

> Conducting a comparative study of Islamic countries' laws and conferring an Islamic character on their content.

And in the ninth theme, one of the suggestions is:[95]

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[93] Izzi Dien, *The Environmental Dimension of Islam*, 93.

[94] See appendix 3.

[95] See appendix 3.

Incorporating the component of environment from Islamic perspective in general education curricula.

Apart from these two points, most of the suggestions in the proposal only repeat the suggestions of the previous documents of Sustainable Development. The 'General Framework of Islamic Agenda for Sustainable Development' undoubtedly needs to be reviewed and enriched with Hamed's suggestions, i.e. the implementation of Islamic economic systems and the revitalisation of the traditional resource management institutions of Islam.

3.4 Conclusion

In conclusion, Sustainable Development can be regarded as a new paradigm of development that pays attention to environmental conservation, in addition to economic growth. The concept of Sustainable Development is also an extension of the theory of Environmental Ethics, although it can probably stand independently as an ethical system. As a theory of Environmental Ethics, the concept of Sustainable Development is usually considered as global Environmental Ethics because it has as appeared on environmental agendas over the last fifteen years. Therefore, the implementation of sustainability policy such as Sustainable Forestry and Sustainable Agriculture can be regarded as the practice of Environmental Ethics. The practice of Sustainable Forestry will be discussed further in chapter four.

In order to elevate Sustainable Development to a global Environmental Ethics, there are two approaches involved: first, a global society sharing the same ethical system that is the concept of Sustainable Development and, second, assimilation of

the common principles of the concept into various backgrounds of the world's ethical systems. The second approach is more suitable for Muslim countries because, as suggested by contemporary Muslim scholars, Islam has its own approaches to achieving Sustainable Development. The approaches comprise two tasks; implementation of an Islamic economic system and the revitalisation of the traditional resource management institutions of Islam. In the context of this research, the second approach will be discussed further in chapter six, which focuses on the two traditional resource management systems, *Ḥarīm* and *Ḥimā*.

Chapter 4

Ethics of Sustainable Forestry: Theory and Practice

4.0 Introduction

Among the most crucial impacts of recent global economic development on the environment are deforestation and forest degradation. As regards forest degradation, there are other related global environmental issues like global warming, ecosystem disruption, habitat destruction, species extinction and natural resources scarcity. This chapter will begin by explaining how the trend of recent development has destroyed natural forest, especially in the developed countries, and to a lesser extent in the developing countries. This will emphasise the importance of forestry policy and management. Since the Earth Summit at Rio de Janeiro in June 1992, great concern about conservation of biodiversity and forestry has been shown. Forest Principles have been issued and actions planned in Agenda 21, especially in section II (Chapter 11 and Chapter 15), towards sustainable forestry. Chapter four will discuss recent policy and management for sustainable forestry beyond the Earth Summit.

In fact, the concern about forestry started earlier than the Earth Summit. In the period of the Industrial Revolution, there were reactions especially from romanticist groups against the demolition of natural forest in Europe and North America. These responses resulted in the preservation of natural forest through various programmes such as National Parks, Forest Reserves and Animal Sanctuaries. This chapter will also look further into these programmes to gain a basic idea of sustainable forestry. Harmonious relationships between humans and forests have already been considered in religious tradition, so that ethical concerns pertaining to forestry are actually nothing new. The last part of this chapter will discuss how sustainable forestry should

be enhanced in terms of value-added policy and management in order to gain full support from the multifaceted global society.

4.1 Human Impact on the Natural Forests

The global natural forests provide a series of vital ecological services, without which the functioning of the whole ecosystem would be disturbed. Despite their important service, however, the global natural forests have been decreasing rapidly, especially in the last two hundred years. Human impacts are recognised as the most influential factors in the loss of the global natural forests. The rapid rate of loss has been activating some groups in Western countries such as the National Trust and Sierra Club since the end of the nineteenth century, and they have consistently organised local campaigns which have spread all over the world, as a wake-up call to the world community to secure the survival of natural forests. Although the campaigns are attracting more and more attention from most of the world community, the natural forests are still decreasing gradually.

In fact, the global natural forests have all been exploited to a variable degree, so that there are two types of loss; first, deforestation and, second, forest degradation. Grainger has defined both to differentiate their concept. According to Grainger, deforestation is 'the temporary or permanent clearance of forest for agriculture or other purposes'.[1] In other words, deforestation involves the changing of land use, when forest is replaced by another land use, including agriculture as well as non-agricultural uses such as mining. Forest degradation is defined by Grainger as 'the temporary or permanent deterioration in the density or structure of vegetation cover or

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[1] A, Grainger, "Improving the Monitoring of Deforestation in the Humid Tropics", in *Tropical Rain Forest-Ecology and Management*, ed. S. L. Sutton, T. C. Whitmore. and A. C. Chadwick (Oxford: Blackwell Scientific Publications, 1983), 387-395.

its species composition'.[2] This means that forest degradation only involves human activities that disturb the natural forest ecosystem such as selective logging. Both deforestation and forest degradation, however, affect the natural ecosystem of forest, albeit to a different degree.

There is another impact of development on land, which is usually known as desertification. In 1977 the United Nations Conference on Desertification (UNCOD) was organised in Nairobi, Kenya to initiate global discussion on this issue.[3] According to Geist, the definition of desertification as proposed by UNCOD refers to the diminution and destruction of the biological potential of the land that can lead ultimately to desert-like conditions.[4] Although desertification does not directly relate to forestry management, the UN's Agenda 21 has included it as an important item related to environmental conservation. In fact, desertification is the ultimate process of transforming forest, which ultimately results in humid land and arid climate. Therefore, it is reasonable to include desertification when discussing forestry management issues.

4.1.1 Deforestation

Since pre-historic times, humans have depended on forests to supply their needs such as food and wood. They started their activities by dwelling as well as hunting, and then changed the natural forest landscape into agricultural land. According to Goudie, deforestation whether by fire or cutting is the most long-

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[2] A. Grainger, "Rates of Deforestation in Humid Tropics: Estimates and Measurements", in *The Human Impact Reader Reading and Case Studies*, ed. Andrew Goudie (Oxford: Blackwell, 1997), 365.

[3] David S. G. Thomas and Nicholas J. Middleton, *Desertification Exploding the Myth* (Chichester: John Wiley , 1994), 1.

[4] Helmut Geist, *The Causes and Progression of Desertification* (Hants: Ashgate Publishing, 2005), 2.

standing and significant way in which humankind has modified the environment.[5] Natural forests have decline by around one-fifth, from five to four billion hectares since pre-agriculture times.[6] Early human activities on the Earth represent almost nothing, however, compared with what we have done just over the last two centuries. It was industrialisation that pushed humans to demolish the natural forests by generating great demands upon forestland and forest resources. Industrialisation not only extracts materials from the natural forests, but also adds pollution to the environment.

In developed countries such as those in Western Europe, deforestation is mainly historical, whereas in developing countries, large-scale deforestation is occurring now.[7] The Industrial Revolution is the main factor which led to deforestation in the early nineteenth century and the process has now spread all over the world, inevitably forcing the developing countries to follow this trend in the name of development and for the sake of their nation. In the late twentieth century, the nations who guarded the finest natural rain forest started to compete with each other in doing bulk logging, which threatens the global future. This situation has compelled global society to discuss the issue of deforestation and also attracted serious attention from the delegates of the Earth Summit in Rio de Janeiro in 1992.

The delegates of the Earth Summit realised that deforestation will not only destroy the natural environment, but will also affect natural resources. As a result, economic development will reach its limit because of resource limitations. In this

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[5] Andrew Goudie, *The Human Impact on the Natural Environment*, 5th Edition (Oxford: Blackwell, 2000), 52.

[6] *Ibid.*, 52.

[7] Andrew R. W. Jackson and Julie M. Jackson,.*Environmental Science: the Natural Environment and Human Impact* (Essex: Longman, 1996), 224.

context, the delegates of the Earth Summit have formulated strategies to control all activities that can cause deforestation as well as to reduce the impact of deforestation upon the global environment. The delegates agreed to uphold Agenda 21 as a shared global agenda to achieve sustainable development. Agenda 21 contains ideas for managing forest land and conserving biodiversity, measures which are popularly known as sustainable forestry. Apart from Agenda 21, the Earth Summit also released the Rio Statement of Forest Principles entitled 'Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests' (see appendix 4).

4.1.2 Forest Degradation

Human activities can degrade forest ecosystems although they may not cause total destruction. Such impact on the forest is usually known as forest degradation. According to Hill, forest degradation can be defined as the loss of the normal function of the forest pertaining to its production and conservation.[8] This definition suggests that forest degradation results in less impact compared with deforestation. According to Gillis, forest degradation refers to the depletion or damage of forest vegetation such that the forest area becomes suitable only for uses which are economically inferior to those of its undamaged state.[9] Therefore, compared with deforestation, forest degradation can be seen as the preliminary stage of forest disturbance that may lead to deforestation.

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[8] Ian Hill, *Forest Management in Nepal: Economics and Ecology* (Washington, The World Bank, 1999), 4.

[9] Malcolm Gillis, "Indonesia: Public Policies, Resources Management and the Tropical Forest", in *Public Policy and the Misuse of Forest Resources*, ed. Robert Rapetto and Malcolm Gillis (Cambridge: The Press Syndicate of the University of Cambridge, 1989), 44.

Probably the human activities that lead to forest degradation are lighter than those that cause deforestation. Such activities are usually performed by an individual or a group who utilise forest natural resources in order to fulfil their needs. According to Young, the pressure that leads to forest degradation usually comes from cutting wood for fuel and domestic timber.[10] Young observes that cutting wood for fuel accounts for 40% of world wood consumption and three-quarters of the wood used in the developing countries.[11] Perhaps, among the regions that are usually affected by such activities are South East Asia and Central Africa, which are mostly covered by tropical forest. According to Peck, in tropical regions, forest degradation became widespread only during the second half of the twentieth century when populations began to increase rapidly.[12] Peck's statement apparently suggests that rapid population growth may pressure a society to consume more natural resources, and at the end it may cause forest degradation.

Therefore, forest degradation can be avoided by providing alternative energy for those people who still depend on wood as their energy source. In addition to this, the forests need to be managed wisely by restriction of their use to essential needs, and once the forests have been used, they must be renewed. According to Kemp, sustainable forest management is really needed ,especially in tropical regions, in order to achieve more effective natural resources and biodiversity conservation.[13] Perhaps sustainable forest management is better than closing the forests to people completely.

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[10] Anthony Young, *Land Resources: Now and for the Future* (Cambridge: Cambridge University Press, 200), 122.

[11] *Ibid.*, 122.

[12] Tim Peck, *The International Timber Trade* (Cambridge: Wood Head Publishing, 2001), 230.

[13] Ronald H. Kemp, "ITTO and Conservation of Biological Diversity", in *Conserving Biological Diversity in Managed Tropical Forest*, ed. Jill M. Blockhus, Mark Dillenbeck, Jeffrey A. Sayer and Per Wegge (Gland: IUCN, 1992) 106.

In this regard, the World Bank suggested it is clear that efforts to preserve forest by denying people access to them will not work, therefore sustainable forest use with adequate and well-planned zoning is the best hope for stemming forest and biodiversity loss.[14]

4.1.3 Desertification

Generally, desertification is not directly related to the forest because it may also involve other types of land. According to Nasr, desertification is defined as the land degradation in arid, semi-arid and sub-humid areas resulting from various factors, including climatic variation and human activities.[15] This definition of desertification was approved at the Earth Summit 1992, and adopted by the United Nation Convention to Combat Desertification (UNCCD).[16] According to Geist, the definition approved by the Earth Summit is the most authoritative definition of desertification that is widely acknowledged by the world community.[17] The definition suggests that desertification does not solely involve forest land, but also may involve other types of land.

Continuous demolition of forest land, however, is considered to be one of the human activities leading to desertification. According to Park, desertification is usually promoted by cultural factors, for instance, rapid growth of population that

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[14]The World Bank, *Advancing Sustainable Development: The World Bank and Agenda 21* (New York: The World Bank, 1997), 31.

[15] M. Nasr, "Prospect of Desertification for Egypt and Libya", in *Environmental Challenges in the Mediterranean 2000 - 2050*, ed. Antonio Marquina (Dordrecht: Kluwer Academic Publishers), 110.

[16] *Ibid.*, 110.

[17] Geist, *The Cause and Progression of Desertification*, 2.

leads to over-grazing, over-cultivation and deforestation.[18] Similarly to deforestation and forest degradation, desertification has been regarded as one of the crucial issues pertaining to the environment. The UNCOD held in Nairobi, Kenya, in 1997 concluded that desertification is often seen as one of the most serious environmental problems in the world.[19] According to Geist, desertification became a crucial environmental problem in the 1920s.[20] Approximately 135 million people are directly affected by desertification, mainly in Africa, the Indian sub-continent and South America.[21] Thus, desertification can be seen as a forest issue like deforestation and forest degradation.

In fact, the UN has paid great attention to desertification since the early 1970s. The UN programmes to combat desertification were formally launched in 1977 with the UNCOD in Nairobi, and the most important result was the adoption of the Plan of Action to Combat Desertification (PACD).[22] The UNCOD signified that the UN has taken this problem seriously although measures might be still inadequate. Beyond the Earth Summit in Rio de Janeiro, in 1992, desertification once again has been taken into account when a special chapter of desertification was included in Agenda 21.[23] These efforts were followed by the UNCCD that was held in Paris, in 1994; its main purpose was to combat desertification in those countries experiencing drought and

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[18] Chris Park, *The Environment: Principles and Applications*, 2nd Edition (London: Routledge, 1997), 436.

[19] *Ibid.*, 435.

[20] Geist, *The Cause and Progression of Desertification*, 4.

[21] Park, *The Environment: Principles and Applications*, 434.

[22] William Mark Adams, *Green Development: Environment and Sustainability in the Third World*, 2nd Edition (London: Routledge, 2001), 209.

[23] *Ibid.*, 210.

desertification.[24] These efforts can also be regarded as attempts at sustainable forestry alongside Agenda 21 and the UNCED's Statement of Forest Principles.

4.2 Practice of Sustainable Forestry

Comprehensive forestry management was proposed by Agenda 21 as an outcome of the Earth Summit in Rio de Janeiro. In Agenda 21, forestry management is discussed in some detail. As a comprehensive plan of action, Agenda 21 provides complete guidelines for UN agencies, governments and civil society towards sustainable forestry. Another outcome of the Earth Summit pertaining to forestry was the UNCED Statement of Forest Principles. The statement contains general principles of forestry policy that should be adopted in all countries. Thus, both Agenda 21 and UNCED's Statement of Forest Principles can be seen as the main points of reference for sustainable forestry.

In Western countries, however, sustainable forestry was practised as long ago as the thirteenth century. In tracing the history of English forests, James suggests that sustainable forestry was practised in England as early as 1217.[25] According to him, King Henry III (1207-1272 CE) issued the Charter of the Forest in 1217, approximately two years after the English legal charter, the Magna Carta.[26] Possibly awareness of sustainable forestry existed before the Charter of the Forest in 1217. According to James, the Magna Carta of 1215 contained four references to forestry in what are generally referred to as clauses 44, 47, 48 and 53.[27] These documented

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[24] Geist, *The Cause and Progression of Desertification*, 18.

[25] N. D. G. James, *A History of English Forestry* (Oxford: Blackwell, 1981), 7.

[26] *Ibid.*, 7.

[27] *Ibid.*, 10.

references prove that sustainable forestry was practised a long time before the Earth Summit.

Moreover, Hughes and Thirgood claim that forests had been managed in ancient Europe a long time before the Magna Carta.[28] According to them, in ancient Greece regulations were enacted to protect forests, even prohibiting the removal of dead wood, and penalties were imposed for violating them.[29] Perlin reported the enactment in ancient Rome of regulations governing the construction of buildings and other works that were to be built on forest land.[30] In the Eastern countries, sustainable forestry had possibly been practised some centuries earlier. According to Sing, there were several initiatives to conserve forest as early as the Chow Dynasty (1122-256 BC).[31] He remarks that the Commission of Mountain Forest was established to institute rules and regulations for the purpose of protecting forests and preventing theft of wood. [32] The Prophet Muhammad (pbuh) declared some areas as forbidden zones and protected zones, and these will be discussed later in chapter 6. Therefore, sustainable forestry is obviously not a new practice, but was already practised long before the issuing of Agenda 21 and the UNCED's Statement of Forest Principles.

Agenda 21 and Statement of Forest Principles can be regarded as the modern plans for sustainable forestry, established to face new and particular challenges. Among the challenges are the population explosion that leads to forest over-exploitation and advanced technology that increases human capability to alter forests

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[28] Donald J. Hughes and J. V. Thirgood, "Deforestation, Erosion and Forest Management in Ancient Greece and Rome", *Journal of Forest History*, 26(2) (1982): 60-75.

[29] *Ibid.*, 60-75.

[30] John Perlin, *A Forest Journey: The Role of Wood in the Development of Civilization* (Cambridge: Harvard University Press, 1989), 114 – 116.

[31] C. Chew Sing, *World Ecological Degradation* (Walnut Creek, CA: Alta Mira Press, 2001), 113.

[32] *Ibid.*, 114.

easily. Agenda 21 and the UNCED's Statement of Forest Principles are intended to face the contemporary challenges, suggesting that they may have different agendas as well as different approaches compared with the previous plans of sustainable forestry. Furthermore, Agenda 21 and the Statement of Forest Principles can be regarded as a global plan, whereas the previous plans of sustainable forestry were designed to treat local environmental problems.

There are also other global plans that can be considered as carrying the same objectives towards sustainable forestry. For instance, IUCN has proposed a comprehensive plan to achieve sustainable forestry by establishing the IUCN Categories of Protected Area. IUCN's proposal for sustainable forestry can be seen as representing the voice of civil society all over the world. As mentioned before, PACD can also be regarded as a plan of sustainable forestry, even though its inclination is more to overcome desertification. Some of the agendas proposed in PACD have close relationships with forest issues, hence it indirectly relates to sustainable forestry programmes.

4.2.1 Sustainable Forestry in Agenda 21

Sustainable forestry has been taken into account in all of Section II in Agenda 21, but it is specifically treated in Chapter 11 entitled 'Combating Deforestation'. According to Salleh, the issue of sustaining the multiple roles and function of forests, the issue of greening degraded areas and the issue of increasing the value of forest are given particular attention in Chapter 11 of Agenda 21.[33] According to Fanzeres and Vogt, this chapter explains the primary role of forests, the major cause of forest

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[33] M. N. Salleh, "Sustainability: The Panacea for Our Forest Ills?", in *Sustainable Forests: Global Challenges and Local Solutions*, ed. O. Thomas Bouman and David George Brand (New York: Food Products Press, 1997), 36.

degradation, the call for industrialised nations to generate pressure towards sustainable forestry and suggestion of beneficial activities to conserve forests.[34] Chapter 11 offers comprehensive agendas to achieve sustainable forestry.

Apart from Chapter 11, other chapters in Section II that also pay attention to forest issues are Chapter 12 entitled 'Managing Fragile Ecosystems: Combating Desertification and Drought', Chapter 13 'Managing Fragile Ecosystems: Sustainable Mountain Development' and Chapter 15 'Conservation of Biological Diversity'.[35] These chapters can be seen as additional chapters to complement Chapter 11 in addressing forest issues. In fact, all the chapters that pertain to sustainable forestry complement each another because forest issues cannot be solved by reference to forestry alone. Because Agenda 21 is a sustainable development agenda, it can indirectly be regarded as the practical dimension of Environmental Ethics in forestry.

4.2.2 Sustainable Forestry in UNCED's Statement of Forest Principles

This can be considered as another plan to achieve sustainable forestry. According to Baker, the statement outlined general principles of forest protection and sustainable management, which also affirm the sovereign right of the state to exploit forests. [36] Formally, the statement was known as 'Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests'.[37] Although the statement was

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[34] Anna Fanzeres and Kristiina A. Vogt, "Other Relevant Initiatives in Forest Certification", in *Forest Certification: Roots, Issues, Challenges and Benefits*, ed. Kristiina A. Vogt, Bruce C. Larson, John C. Gordon, Daniel G. Vogt and Anna Fanzeres (Florida: CRC Press LCC, 2000), 24.

[35] The World Bank, *Advancing Sustainable Development: The World Bank and Agenda 21*, 32 –37.

[36] Susan Baker, *Sustainable Development* (Oxford: Routledge, 2006), 56.

[37] *Ibid.*, 56.

categorised as non-legally binding or 'soft laws', it is very important in guiding the world community towards sustainable forestry.

UNCED's Statement of Forest Principles consists of fourteen principles that reflect the first global consensus on forests, by which all countries commit themselves to cooperate on forest issues.[38] The principles that are used in guiding all countries to manage and conserve their forests towards sustainability can be applied to all types of forests, whether natural or planted, in all geographical regions. These principles begin by affirming the sovereign right of a country to exploit their own resources and the sovereign right to manage their forests in accordance with their socio-economic background. After affirming such sovereign rights, the statement persuades the world community about the important role of forests and their obligation to manage the forests wisely. Interestingly, in the fifth principle, the statement also emphasises the importance of culture and social identity in conserving nature. Clearly, UNCED's Statement of Forest Principles provides the basic principles for practising Environmental Ethics in forestry.

4.2.3 IUCN Categories of Protected Areas

Apart from the UN and its agencies, IUCN also proposes a practical way to practise sustainable forestry. As a global environmental organisation, IUCN pays much attention to forest issues by suggesting its own categories of protected areas. In fact, the IUCN Categories of Protected Areas had been initiated by IUCN when the General Assembly of IUCN defined the term 'National Park' in 1969.[39] Then the initiative was followed by the IUCN's Commission on National Parks and Protected

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[38] See appendix 4.

[39] IUCN Commission on National Parks and Protected Areas, *Guidelines for Protected Areas Management Categories* (Gland: IUCN, 1994), 5.

Area (CNPPA) Report entitled 'Categories, Objectives and Criteria for Protected Area' that was published in 1978.[40] The purposes are:[41]

a. To alert governments to the importance of protected areas.

b. To encourage governments to develop systems of protected areas with management aims tailored to national and local circumstances.

c. To reduce confusion which has arisen from the adoption of many different terms to describe different kinds of protected areas.

d. To provide international standards to help global and regional accounting and comparisons between countries.

e. To provide a framework for the collection, handling and dissemination of data about protected areas.

f. To improve communication and understanding between all those engaged in conservation.

The IUCN Categories of Protected Areas guides the world community with practical suggestions for ways to conserve the environment as well as to achieve sustainable forestry.

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[40] *Ibid.*, 5

[41] *Ibid.*, 5

The IUCN Categories of Protected Areas were widely acknowledged, even by the UN, as it adopted the IUCN categories into the United Nations List of Protected Areas in 1997.[42] Basically, IUCN defines the protected areas as: 'an area of land or sea dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means'.[43] Although the definition does not focus only on forest lands, this type of land is among the major concerns of the IUCN Categories. The IUCN Categories of Protected Areas classify protected areas in eight categories:[44]

a. Strict Nature Reserve / Wilderness Area

The Strict Nature Reserve refers to an area of land or sea that possesses some outstanding feature of representative ecosystems, geological or physiological features or species, which is available primarily for scientific research and environmental monitoring.[45] The Wilderness Area refers to a large area of unmodified or slightly modified land or sea that retains its natural characteristics and influence without permanent or significant habitation, which is protected and managed to preserve its natural condition.[46]

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[42] Martin Holdgate and Adrian Phillips, "Protected Areas in Context", in *Integrated Protected Area Management*, ed. Michael Walkey, Ian R. Swingland and Shaun Russell (Boston: Kluwer Academic Publishers,1999), 10.

[43] *Ibid.*, 2.

[44] *Ibid.*, 7-8.

[45] Nigel Dudley and Adrian Philips, *Forests and Protected Areas: Guidance on the Use of the IUCN Protected Area Management Categories* (Gland: IUCN, 2006), 15.

[46] *Ibid.*, 15.

b. National Park

This category refers to an area that is mainly managed for ecosystem protection and recreation.[47] It is intended to protect the ecological integrity of one or more ecosystems for future generations, to exclude exploitation and occupation inimical to the purpose of designation of the area and also to provide a spiritual foundation and scientific, recreational and visitor opportunities.[48]

c. National Monument / Natural Landmark

This category is mainly to do with conservation of specific natural features.[49] According to Dudley and Philips, the category includes areas containing specific natural and cultural features of outstanding or unique value because of their inherent rarity, representativeness or aesthetic qualities or cultural significance, for instance, a great waterfall or rock formation.[50]

d. Habitat / Species Management Areas/ Animal Sanctuary

This category is specifically for wildlife conservation and refers to an area of land or sea subject to active intervention for management purposes so as to ensure the maintenance habitats meet the requirements of specific species.[51] According to Holdgate and Phillips, such areas require active management including the

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[47] *Ibid.*, 16.

[48] Holdgate and Phillips, "Protected Areas in Context", 9.

[49] Dudley and Philips, *Forests and Protected Areas: Guidance on the Use of the IUCN Protected Area Management Categories*, 16.

[50] *Ibid.*, 16

[51] *Ibid.*, 16

maintenance of traditional land-use practices such as the mowing of reeds, burning of heaths and regulated grazing of upland pastures.[52]

e. Protected Landscape / Seascape

This category refers to an area of land, coast or sea, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological or cultural value and often with high biological diversity.[53] All activities are restricted there except the essential activities of human management and use for the conservation of the features for which the area was designated.[54]

f. Managed Resources Protected Area

This category is mainly for the sustainable use of natural resources containing predominantly unmodified natural systems.[55] According to Holdgate and Phillips, this category includes any area where ecosystem and species of wildlife are conserved, so that they may be used sustainably.[56]

While Agenda 21 and UNCED's Statement of Forest Principles prepare the theories and principles to achieve sustainable forestry, the IUCN Categories of Protected Areas provide practical guides. Sustainable forestry can also be treated as a theory of Environmental Ethics because it is part of the concept of sustainable development. In

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[52] Holdgate and Phillips, "Protected Areas in Context", 9.

[53] Dudley and Philips, *Forests and Protected Areas: Guidance on the Use of the IUCN Protected Area Management Categories*, 16.

[54] Holdgate and Phillips, "Protected Areas in Context", 9.

[55] Dudley and Philips, *Forests and Protected Areas: Guidance on the Use of the IUCN Protected Area Management Categories*, 16.

[56] Holdgate and Phillips, "Protected Areas in Context", 10.

this sense, the IUCN Categories can be seen as an important way of putting Environmental Ethics into practice.

4.3 Indigenous Knowledge and Religious Ethics in Forestry

As concluded in chapter three, the elevation of sustainable development to a global Environmental Ethics involves two approaches: first, the global society shares the same ethical system, that is, the concept of sustainable development and second they assimilate the common principles of the concept into various backgrounds of the world's ethical systems. As part of the concept of sustainable development, sustainable forestry can be achieved in the global context by either approach. In fact, the first approach involves all forestry agendas that have been proposed by the UN and IUCN, as discussed previously. The second approach involves indigenous knowledge and religious ethics in the perception of forest issues.

The role of indigenous knowledge and religious ethics is important because they offer multiple dimensions of forest management including the practice of local traditions as well as the element of sacred values. According to Fanzeres and Vogt, Chapter 11 in Agenda 21 explains the need for the extension of the system of protected areas where the social and spiritual values of indigenous people, forest dwellers and local communities could be fulfilled.[57] The importance of culture and social identity have also been emphasised in the fifth principle of UNCED's Statement of Forest Principles.[58] According to Klosster, conventional scientific approaches to forest management often fail because they do not adequately address

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[57] Anna Fanzeres and Kristiina A. Vogt, "Other Relevant Initiatives in Forest Certification", 24.

[58] See appendix 4.

environmental complexity, heterogeneity or the role of recurring disturbance.[59] The situation becomes worse when the conventional scientific approaches often fail to create the local social institution which is important to encourage environmentally-friendly behaviour.[60] Therefore, indigenous knowledge and religious ethics play an important role in assimilating the conventional concept of sustainable forestry into various backgrounds of the world community.

4.3.1 Traditional Ecological Knowledge

Among the important backgrounds of the world community is traditional ecological knowledge. Every local community which has lived for generations in a particular place has its own understanding of the surrounding ecosystem. Thus, according to LaDuke, traditional ecological knowledge refers to the culturally and spiritually based way in which indigenous people relate to their ecosystem.[61] 'The culturally and spiritually based way' might, however, be considered as commonsense knowledge, so that it could not be regarded as proper knowledge. Such knowledge needs to be organised before it can be elevated to a discipline of knowledge. Therefore, Berkes proposed a better definition of traditional ecological knowledge, which is:

> A cumulative body of knowledge, practice and belief evolving by adaptive processes and handed down through generations by

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[59] Daniel James Klooster, "Toward Adaptive Community Forest Management: Integrating Local Forest Knowledge with Scientific Forestry", *Economic Geography*, 78(1), 2002: 43-44.

[60] *Ibid.*, 44.

[61] Winona LaDuke, "Traditional Ecological Knowledge and Environmental Future", in *Liberating Faith: Religious Voice for Justice, Peace and Ecological Wisdom*, ed. Roger S. Gottlieb (Lanham: Rowan & Littlefield, 2003), 513.

> cultural transmission, about the relationships of living beings (including humans) with one another and with their environment.[62]

Berkes's definition is the best, referring to traditional ecological knowledge that involves various dimensions, and fits with contemporary environmental studies.

Traditional ecological knowledge can be seen either as empirical knowledge or religious (also spiritual) knowledge. According to LaDuke, the traditional ecological knowledge is founded on spiritual-cultural instructions from 'time immemorial' and on generations of careful observation within an ecosystem of continuous residence.[63] LaDuke implies that traditional ecological knowledge also carries out scientific methods besides cultural sources of knowledge such as belief and custom. In this regard, Berkes proposed a very comprehensive view illustrating the scope of traditional ecological knowledge, shown in Figure 4.1 below.[64]

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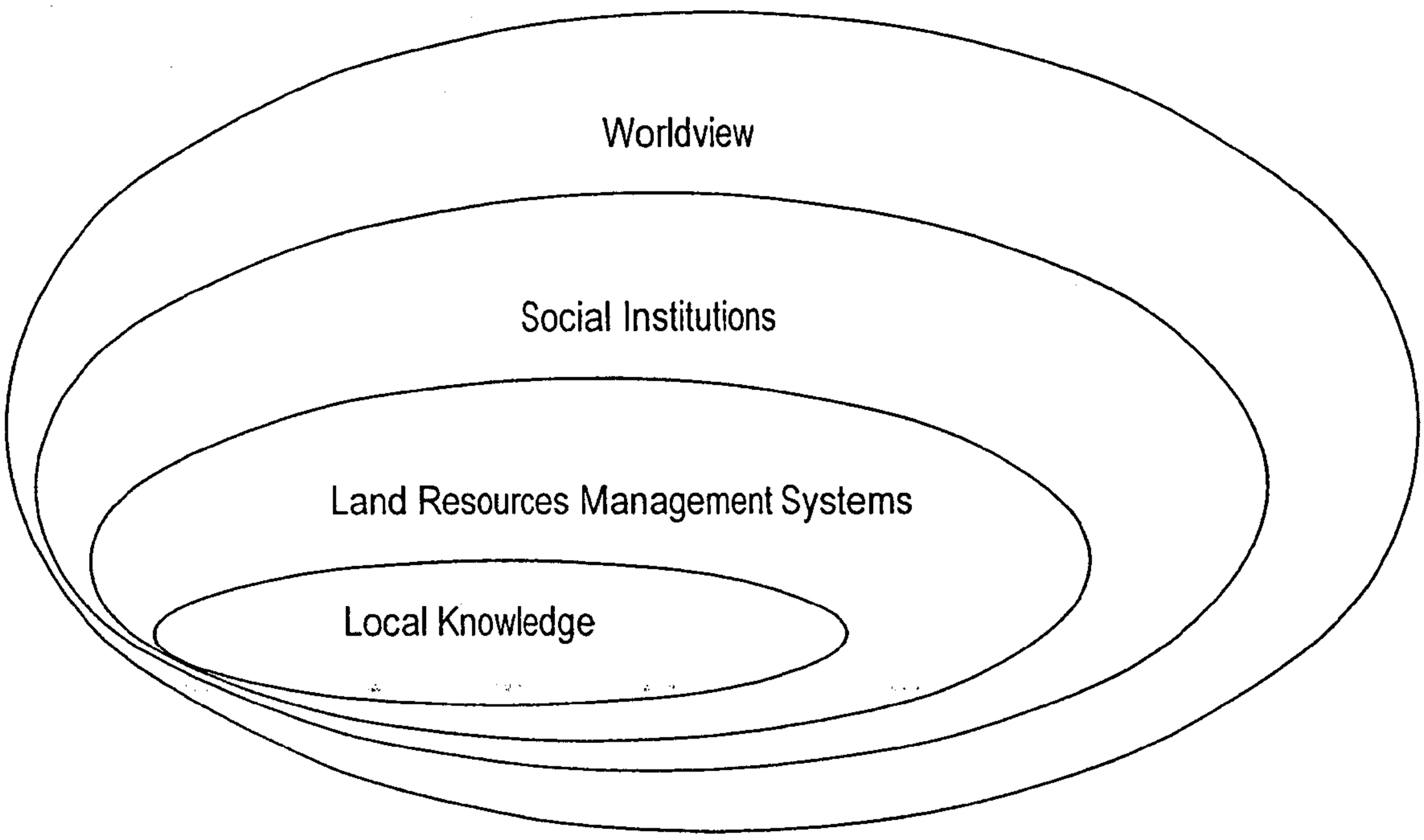
[62] Berkes, *Sacred Ecology: Traditional Ecological Knowledge and Resources Management*, 8.

[63] LaDuke, "Traditional Ecological Knowledge and Environmental Future", 513.

[64] Berkes, *Sacred Ecology: Traditional Ecological Knowledge and Resources Management*, 13.

Figure 4.1



Berkes's Model (of the role) Traditional Ecological Knowledge[65]

Originally, this model was used by Berkes as a framework for the analysis of traditional ecological knowledge.[66] It also indicates the model of traditional ecological knowledge that illustrates the scope and the level of the knowledge. In Berkes's model, traditional ecological knowledge consists of four interrelated levels: knowledge of animals, plants, soils and landscape; land and resource management systems; social institutions; and worldview.[67]

The suggested model actually indicates that traditional ecological knowledge can be considered as a systematic management of ecosystem similar to the current

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[65] *Ibid.*, 13

[66] *Ibid.*, 13

[67] *Ibid.*, 13-14.

scientific one. At level one, traditional ecological knowledge contains the relevant knowledge of animals, plants, soils and land. Such knowledge enables a traditional society to manage their ecosystem systematically as shown at level two. In order to accomplish the management systems, it needs proper institutions in society as indicated by level three. All three levels are actually rooted in a belief in or perception of the universe, which is prominently known as worldview. Indeed, in this context traditional ecological knowledge is considered as an alternative approach to sustainable forestry.

4.3.2 Sustainable Forestry from Religious Perspective

The religious perspective on conservation is also included under the theme of traditional ecological knowledge. The religious perspective is usually inherited through religious holy books and the relevant teachings are transferred through the religious social institutions. According to Gottlieb, religion is now a leading voice exhorting humankind to respect nature, to love non-human beings as human neighbours and also to think carefully about social policies and economic priorities.[68] Today all great religions in the world have responded to the contemporary environmental crisis, including forest issues. In the context of sustainable forestry, the religious perspective has a variety of perceptions of forest lands. Such perceptions can be considered as religious environmental worldviews towards sustainable forestry.

Most religious discussion on sustainable forestry apparently focuses on environmental worldview and circulates on the theoretical periphery. Given Berkes's model, the religious discussion needs to focus on other levels such as the role of religion in establishing social institutions and forming management systems for

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[68] Gottlieb, *A Greener Faith: Religious Environmentalism and Our Planet's Future*, 8.

environmental conservation. According to Gottlieb, religious ideas of environment should be elevated into institutional commitment, political action and spiritual inspiration.[69] In this regard, Palmer and Finlay have unveiled a good example of how religious ideas can be applied to solve unsustainable fishing on the Tanzanian coast.[70] In this case, the decision of a local religious scholar has been threaded into social commitment, and it has been used successfully to ban dynamite fishing.[71] Actually, religion can contribute more to achieving sustainable forestry than just offering environmental worldviews.

Therefore, one of the challenges faced by religious scholars is to find appropriate ways to put religious environmental ideas into practice. Berkes's ideas can be considered as one of the models in this context. Gottlieb also suggests another model which can be applied to sustainable forestry. According to Gottlieb, religious environmental ideas need to be interwoven in institutional commitment, political action and spiritual inspiration.[72] Gottlieb's model, however, does not explain the technical procedure required or the sequence of religious environmental ideas, institutional commitment, political action and spiritual inspiration. Perhaps, Gottlieb's model can be illustrated by Figure 4.2 below.

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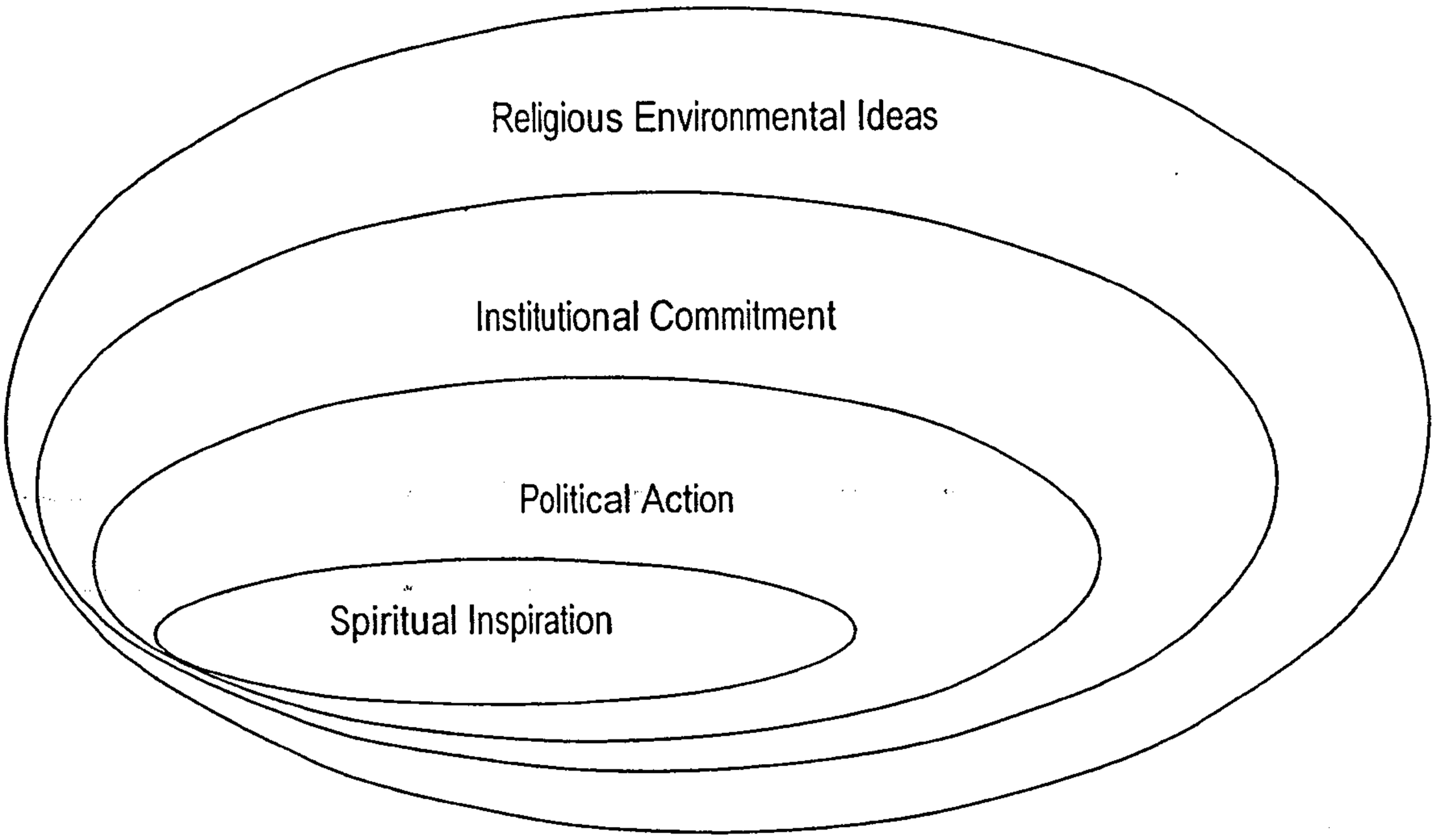
[69] *Ibid.*, 21.

[70] Martin and Finlay, *Faith in Conservation: New Approach to Religions and the Environment*, 3-5.

[71] *Ibid.*, 5.

[72] Gottlieb, *A Greener Faith: TheReligious Environmentalism and Our Planet's Future*, 215.

Figure 4.2



Religious Role Model for Sustainable Forestry[73]

4.3.3 Sustainable Forestry from the Islamic Perspective

Muslims scholars respond that Islam also pays great attention to forest issues and the importance of biodiversity. According to Izzi Dien, the holy *Qur'ān* clearly indicates that all forms of God's creation are diverse signs of the Creator, and thus the notion of biological diversity is one of the main themes that *al-Qur'ān* uses in describing intricate systems created by God.[74] There are many verses in *al-Qur'ān* that pertain to forest issues and biodiversity, and among them are verse 99 *sūrah al-An`ām* and verse 53 *sūrah Ṭā Hā.*

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[73] This model is based on Gottlieb's opinion of the role of religion in environmentalism. See Gottlieb, *A Greener Faith: Religious Environmentalism and Our Planet's Future*, 21 and 215.

[74] Izzi Dien, *The Environmental Dimensions of Islam*, 27.

It is He who has sent down water from heavens, and thereby We have brought vegetation of every kind, out of this We have brought forth green foliage and then from it close-packed ears of corn, and out of the palm tree, from the sheath of it, thick clustered dates, hanging down heaviness, and garden of vines, and the olive tree, and the pomegranate, all resembling one another and yet so different.[75]

He it is who spread the Earth for you, and made in it paths for you and sent down water from the sky, and then through it We brought forth many species of diverse plants.[76]

Therefore, *al-Qur'ān* reveals many explanations that can be considered as rich sources of environmental worldview. Contemporary Muslim scholars have discussed this issue widely in responding to the current environmental crisis.

To them, Islam does not only offer an alternative environmental worldview, but also a model for practising sustainable forestry as well as the technical procedure to accomplish the practice. According to Jenkins, Islam offers an alternative practical strategy for environmental conservation by guiding the way in which moral authority assimilates unforeseen social challenges and also by offering pragmatic resources to address environmental issues.[77] Among the models of sustainable forestry in Islamic tradition are *Ḥarīm* and *Ḥimā*. In the context of this research, the practice of *Ḥarīm*

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[75] *al-Qur'ān*, 6 : 99.

[76] *al-Qur'ān*, 20 : 53.

[77] Jenkins, "Islamic Law and Environmental Ethics: How Jurisprudence", 338-341.

and *Ḥimā* will be studied further in chapter six. Therefore, in order to explain the Islamic perspective on sustainable forestry, Berkes's model and Gottlieb's model will be taken into account in the analysis of *Ḥarīm* and *Ḥimā*.

4.4 Conclusion

This chapter has explained the practical dimension of sustainable development by focusing on sustainable forestry. The concept of sustainable forestry has been proposed by the UN through Agenda 21 and UNCED's Statement of Forest Principles after the Earth Summit in 1992. Apart from these policies, IUCN also proposed a practical way to achieve sustainable forestry, by suggesting IUCN Categories of Protected Areas. As discussed in chapter three, however, applying these policies is not the only approach to practising sustainable development, especially sustainable forestry. As suggested in chapter three, another approach is to assimilate the common principles of sustainable forestry into various backgrounds of the world community.

This approach needs indigenous knowledge and religious ethics in the context of forest issues. The analysis of this approach suggests two models for practising sustainable forestry, which are Berkes's model and Gottlieb's model. Both models can also be used to guide the practice of environmental ethics in the context of applying traditional and religious approaches. The models offer a clear-cut framework showing how the theory of religious Environmental Ethics can be transformed into practice. Islam also pays great attention to sustainable forestry. The Islamic perspective does not only pertain to environmental worldviews, but also the model and the procedure to achieve sustainable forestry. One of the best examples explaining this issue is the practice of *Ḥarīm* and *Ḥimā*, which will be studied further in chapter six.

Chapter 5

The Role of Ethics in Islamic Jurisprudence

5.0 Introduction

Generally in Islamic tradition, Ethics is synonymous with *Akhlāq*, although in fact there is some dissimilarity between them. *Akhlāq* in Islam does not contain only Ethics, however, but also consists of *`Aqīdah* and *Sharī`ah* teachings that cannot be practised separately. Islamic Environmental Ethics can be defined as a set of teachings in *Ahklāq* about the relationships of humankind and their nature. This chapter will analyse the place of ethics in Islamic tradition, which is not only related to *Akhlāq* but also *`Aqīdāh* and *Sharī`ah* as well. This analysis is very useful for an understanding of the importance of Islamic bases for what is good and bad as seen by *Fiqh* (Islamic jurisprudence), which will support the argument for Islamic Environmental Ethics that we will discuss in chapter seven. Islamic laws also stand on the concept of good and bad or right and wrong, just as Ethics does.

Development of contemporary *Fiqh* shows great efforts by Muslim scholars to ensure Islamic laws are relevant to modern issues, especially those related to science and technology. Muslim scholars strive to put the Islamic perspective, especially *hukm*, on most issues relevant to science and technology including environmental issues. Therefore this chapter will study how modern issues have influenced the development of contemporary *Fiqh* which has a bearing on Islamic Environmental *ethics*. Nowadays, studying issues of science and technology usually involves an ethical perspective. Ethics has become one of the commonest disciplines applied by scholars when they discuss an issue in science and technology. Because of the

importance of Ethics in modern academia, this chapter also discusses the role of Ethics in contemporary *Fiqh*, and proposes a new approach to the study of *Fiqh*.

5.1 Ethics from the Islamic Perspective

Ethics usually refer to *Akhlāq* or *`Ilm al-Akhlāq* in Islamic tradition. According to al-Sharqāwi, *Akhlāq* means the knowledge of human behaviour, cultivation of piety and avoidance of evil.[1] This knowledge teaches good behaviour by distinguishing good or right actions from bad or wrong actions, and also revealing the excellent role model to be followed. As a discipline of knowledge, *Akhlāq* does not only list good or right actions and bad or wrong actions, but also argues what is good or right and what is bad or wrong. Clearly, in this sense *Akhlāq* is almost similar to Ethics because both subjects discuss human behaviour and also explain the reason why an action is considered good or right, bad or wrong.

Perhaps al-Sāyih and al-Manā`ī were on the right lines when they defined *Akhlāq* by distinguishing the opinion of traditional Muslim scholars from the opinion of contemporary Muslim scholars.[2] The traditional Muslim scholars define *Akhlāq* as natural behaviour, meaning that every single action is committed without the need for thought.[3] The definition emphasises the sense of obligation in controlling individual conduct. Contemporary Muslim scholars define *Akhlāq* as self-strength that encourages good manners and avoids bad manners, so that every single action can be determined as good or bad.[4] The definition emphasises the role of reasoning in

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[1] Muhammad `Abd Allah al-Sharqāwī, *al-Fikr al-Akḥlāqī Dirāsah Muqāranah* (Beirut: Dar al-Jīl, 1990), 17.

[2] Ahmad `Abd al-Rahīm al-Sāyih and `Aishah Yusuf al-Manā`ī, *Dirāsāt fi al-Taṣawwuf wa al- Akhlāq* (Doha: Dar al-Thaqāfah, 1991), 54.

[3] *Ibid.*, 54.

[4] *Ibid.*, 54.

influencing an individual action. Basically, both definitions could be seen as a complement to the dual approaches of Ethics based on Axiology and Deontology.

Muslim scholars in the early period before Greek philosophy had an influence on Islamic knowledge had discussed *Akhlāq* in terms of obligation. They explained what kind of action should be considered as *wājib* (obligatory), *mandūb* (desired), *mubāh* (permissible), *makrūh* (reprehensible) and *harām* (forbidden). Possibly this led them to define *Akhlāq* by emphasising the theory of duty or deontological approach (obligations). In my opinion, the discourse on the theory of value and the axiological approach only started among Muslim scholars when theological debate was sparked, especially between al-Ashā`irah and al-Mu`tazilah. Most of the discussion on *Akhlāq* among contemporary Muslim scholars has been influenced by this approach, so the definition of *Akhlāq* tends to emphasise the theory of value.

Both definitions are acceptable because Islamic teachings can explain either the theory of value or the theory of duty by referring to *al-Qur'ān* and *al-Sunnah*. In the other sense, Islamic teaching has its own view on value and duty although there are various opinions among Muslim scholars. Most importantly, the discourse indicates the central position of *Akhlāq* in Islamic teachings. Basically, *Akhlāq* represents at least one-third of Islamic knowledge, and every single Muslim is required to acquire the knowledge. Basic knowledge of *Akhlāq*, for instance, service to one's neighbours, is considered as a religious duty for every single Muslim.

The teachings of the Prophet Muhammad (pbuh) in this regard are obviously central to *Akhlāq*. In *al-Muwaṭṭā'*, Mālik recorded that the Prophet said, 'I have been sent only for the purpose of perfecting *Akhlāq*'.[5] In terms of the hadith, *Akhlāq* is considered as an important part of Islamic teachings alongside *`Aqīdah* and *Sharī`ah*.

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[5] Mālik bin Anas, *al-Muwaṭṭā'*, ed. Muhammad Fuad `Abd al-Bāqī (Cairo: Dar Ihya' al-Kutub al-`Arabiyyah, no. date), 708.

There are many verses in *al-Qur'ān* directly or indirectly concerning *Akhlāq*. Interestingly, Irving, Ahmad and Ahsan have compiled some selected verses of *al-Qur'ān* that relate to aspects of morality.[6] They categorise aspects of morality into Moral Values, Norm of Social Behaviour, the Three Deadly Sins and Crime and Moral Failings.[7] Their work is important because it reveals the perception of *al-Qur'ān* in the light of the contemporary aspects of morality.

Besides *al-Qur'ān*, *Akhlāq* also has been emphasised widely in *al-hadīth* including the actions of the Prophet Muhammad (pbuh) himself. According to *al-Qur'ān* all his actions indicate the greatest model of morality to humankind.[8] The most authenticated sources of *al-hadīth* in Islamic tradition, *Saḥīḥ al-Bukhārī* and *Saḥīḥ al-Muslīm*, compiled some narratives related to *Akhlāq* in a special chapter, named *Kitāb al-Ādāb*. Later scholars, who came after the al-Bukhārī and al-Muslim period, explored aspects of morality based on *al-hadīth* in a book. Among them was al-Nawāwī (1234-1278 CE), who wrote the great book related to *Akhlāq*, '*Riyāḍ al-Ṣāliḥīn*'.[9] Another scholar, who discussed only the major sins, was al-Dhahabī (1274-1348 CE) and he wrote the book '*Kitāb al-Kabā'ir*'.[10] Clearly, *al-hadīth* as the second source of Islamic knowledge also pays great attention to *Akhlāq*.

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[6] Thomas B. Irving, Khurshid Ahmad and M. Manazir Ahsan, *The Qur'ān Basic Teachings*, 2nd Revised Edition (Leicester: The Islamic Foundation, 2002), 155-198.

[7] *Ibid.*, 155-158.

[8] *al-Qur'ān*, 68:4.

[9] Muhy al-Din Abī Zakariyyā Yahyā bin Sharīf al-Nawāwī, *Riyāḍ al-Ṣāliḥīn min Kalam Sayyid al-Mursalīn* (Beirut: Muassasah Manahil al-I`rfan, no date).

[10] Shams al-Dīn Muhammad al-Dhahabī, *Kitāb al-Kabā'ir* (Beirut: al-Maktabah al-Thaqafiyyah, no date).

Sometimes, *Akhlāq* is defined as *al-Dīn* (religion) itself, and also as the way of life.[11] Such a definition indicates that *Akhlāq* holds the most important position in Islamic teachings, related closely to *`Aqīdah* and *Sharī`ah*. According to Hourani, it was al-Ghazālī (1058-1111 CE) who largely classified these three disciplines of Islamic knowledge.[12] In reality, this classification of Islamic knowledge is still widely accepted by Muslim scholars, although sometimes they may use different terms. For instance, according to al-Ghazālī in his great book *Iḥyā' `Ulūm al-Dīn*, *`Ilm al-Muā`malah* (the knowledge that was imposed on human beings) was classified into *I`tiqād* (belief), *F`il* (action) and *Tark* or *al-Turūk* (behaviour).[13] According to this classification, al-Ghazālī categorised *Akhlāq* in the discipline of knowledge that he named *Tark* or *al-Turūk*.

Many Muslim scholars consider *Akhlāq* and Sufism to refer to a similar subject in Islamic knowledge. Therefore, they usually define Sufism from the perspective of *Akhlāq*, in the sense that Sufism and *Akhlāq* are synonymous.[14] Mahmud, however, clarifies the relationships of *Akhlāq* and Sufism by proposing that *Akhlāq* is the basis of Sufism as well as the fruit of Sufism practice.[15] According to al-Sāyih and al-Manā`ī, *Akhlāq* has both theoretical and practical parts, and Sufism is considered as its practical part.[16] Basically there is not much difference between these opinions. *Akhlāq* and Sufism concern the same discipline of Islamic knowledge,

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[11] al-Sāyih and al-Manāi`e *Dirāsāt fi al-Taṣawwuf wa al- Akhlāq*, 53.

[12] George F. Hourani, "Ghazali on Ethics of Action", *Journal of the American Oriental Society*, Vol. 96, No. 1, January – March (1976), 69.

[13] Abū Hāmid Muhammad al-Ghazāli, *Iḥyā' U`lūm al-Dīn*, Vol. 1 (Beirut: Sharkah Dar al-Arqam Bin Abī al-Arqam, 1998), 23-24.

[14] `Abd al-Ḥalīm Maḥmūd, *Qadiyyah al Taṣawwuf al-Muqidh min al-Ḍalāl* (Cairo: Dar al-Ma`rifah, 1988), 38-39.

[15] *Ibid.*, 40.

[16] al-Sāyih and al-Manā`ī, *Dirāsāt fi al-Taṣawwuf wa al- Akhlāq*, 50-57.

although *Akhlāq* covers wider topics of the discipline whereas Sufism only focuses on the practical part.

5.1.1 Ethics in Islamic Teachings

There is mutual interaction between *`Aqīdah*, *Sharī`ah* and *Akhlāq*. In fact, the interaction existed in Prophet Muhammad's (pbuh) time until the development of Islamic disciplines of knowledge. The major disciplines such as *`Aqīdah*, *Sharī`ah* and *Akhlāq* then developed separately into sub-disciplines. Such a development was seen to compartmentalise Islamic knowledge without any relationships between the parts. In reality, however, it was not practised in Islamic tradition, most traditional Muslim scholars considering other disciplines when they were commenting on an issue in a particular discipline. Therefore, the development of the Islamic discipline of knowledge should be regarded as the development of a system of knowledge as a whole, not a process of compartmentalisation of knowledge.

In relation to this statement, Reinhart made an interesting remark to the effect that there is no hermetic seal between the various disciplines of Islamic thought.[17] He wrote further that no Muslim scholar studied Islamic law without also being familiar with Islamic theology, and no Islamic philosopher was unaware of the aims and methods of Islamic law.[18] Clearly, his remark indicates that some Western scholars also apply the unique Islamic approach towards integration of knowledge. This point is very important for anyone who wants to understand Islamic ethics, because the discourse might be found in Islamic theology and Islamic law. One could not study

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[17] A. Kevin Reinhart, "Islamic Laws as Islamic ethics", *Journal of Religious Ethics*, Vol. 11, No. 2, Fall (1983), 2.

[18] *Ibid.*, 2

Islamic ethics comprehensively without being familiar with Islamic theology and Islamic law or to ignore both disciplines.

According to Hourani, Ethics from an Islamic perspective refers not only to *Akhlāq* but also to *Sharī`ah*.[19] He divides Islamic ethics into two categories; ethics of action referring to *Fiqh* or *Sharī`ah* and ethics of character referring to *Akhlāq*.[20] Hourani's view was apparently influenced by his understanding of al-Ghazālī's classification of knowledge. He agreed with al-Ghazālī in classifying Islamic knowledge into *Kalām*, *Sharī`ah* and *Akhlāq*, and regarded *Sharī`ah* as ethics of action and *Akhlāq* as ethics of character. He was probably not aware that *Sharī`ah* also discusses very technical and specific aspects of Islamic law, which are sometimes excluded from ethics. He is correct, however, if he refers to certain aspects of *Sharī`ah*, such as the discourse of *Maqāṣid al-Sharī`ah*, as ethics of action.

Hourani conceded that the discourse of ethics could be found in *Kalam*. He discussed widely the ethical aspects of al-Ghazali's main treatise on *Kalam*, *al-Iqtiṣād fi al-I'tiqād*. Clearly, the discussion indicates that there are certain aspects of ethics in *Kalam*. Hourani did not assume *Kalam* as ethics of belief as he did *Sharī`ah* and *Akhlāq*. Therefore, based on al-Ghazālī's classification of knowledge, ethics probably refers to *Akhlāq* but it is unacceptable to discuss *Akhlāq* without any mention of *`Aqīdah* and *Sharī`ah*. In this regard, Izzi Dien proposes a better way to understand Islamic ethics:

> Ethics in Islam is not based on a variety of separate scattered virtues, with each virtue, such as honesty or truth, standing isolated from others. Rather virtue in Islam is a part of a total,

[19] Hourani, "Ghazali on Ethics of Action", 69-70.

[20] *Ibid.*, 70.

comprehensive way of life which serves to guide and control all human activity".[21]

In the light of this statement, ethics in Islamic teachings cannot stand by itself, but is part of a comprehensive system of life. In terms of classification of knowledge, ethics is most like *Akhlāq*, but it has a very mutual relationship with the other two disciplines of Islamic knowledge, *`Aqīdah* and *Sharī`ah*. There are many aspects of ethics in *`Aqīdah* and *Sharī`ah*, and hence these two disciplines cannot be ignored by anyone who wants to understand Islamic ethics. The classification of knowledge in Islam is to facilitate a Muslim's understanding of the Islamic system, not to compartmentalise the knowledge into separate disciplines of knowledge. Therefore, a Muslim needs to learn *`Aqīdah*, *Sharī`ah* and *Akhlāq* together in order to practise genuine piety.

5.1.2 Schools of Thought in *Akhlāq*

There is a simple question that has continuously attracted Muslim scholars. Are there schools of thought in *Akhlāq*? Ethics in Greek civilisation yielded certain schools of thought, each upholding its own ethical principles. These were then inherited by European philosophers in the Middle Ages. Does this situation occur in *Akhlāq*, the Islamic discipline most synonymous with ethics? Most Muslim scholars concede that there are certain schools of thought in *`Aqīdah* or *`Ilm al-Kalām* as well as in *Sharī`ah* or *Fiqh*, and it is supposed to be the same in *Akhlāq*.

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[21] Mawil Izzi Dien,., "Islamic Environmental Ethics, Law and Society", in *Ethics of Environment and Development: Global Challenge, International Response*, ed. J. Ronald Engel and Joan Gibb Engel (Tucson: The University of Arizona Press, 1990), 192.

Some Muslim scholars are, however, persuaded that there are no such schools of thought in *Akhlāq*, as most of its principles have been guided by *al-Qur'ān* and *al-Sunnah*, and there is no need to acquire such principles from philosophy.[22] They clearly reject the influence of philosophy in determining principles of *Akhlaq*. In response to this, Subḥī has proposed three arguments why the situation needs to be reviewed:[23]

a. Philosophy especially logic has influenced Islamic knowledge in Islamic theology (*`Ilm al-Kalām*) and Islamic jurisprudence (*Uṣūl al-Fiqh*), and most Muslim scholars recognise its role as well as its impact. Therefore the same situation also could be applied to *Akhlāq*.

b. Muslim society in every period inevitably will face new challenges because time and circumstances are always changing. Besides *al-Qur'ān* and *al-Sunnah* as basic principles, there is a need to apply philosophical methods in *Akhlāq* in order to overcome many new social, cultural and political problems.

c. Basically, Islam does recognise the role of reasoning and rational argument, as they have been encouraged by *al-Qur'ān* and *al-Sunnah*. Furthermore, Islam also appreciates any disciplines, such as mathematics and chemistry, that apply philosophical and empirical methods in acquiring knowledge. Therefore, those methods are also applicable in *Akhlāq*.

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[22] Ahmad Maḥmūd Subḥī, *al-Falsafah al-Akhlāqiyah fī al-Fikr al-Islamī* (Beirut: Dar al-Nahḍah al-`Arabiyah, 1992), 14.

[23] *Ibid.*, 16-17.

Subḥī's response on this issue is probably right because the discourse of *Akhlāq* among classical Muslim scholars has shown such a trend. Among the first Muslim scholars who started the discourse of *Akhlāq* were al-Fārābī (872-950 CE), Ibn Miskawayh (932-1030 CE), al-Ghazālī, Ibn Arabī (1165-1240 CE) and Ibn Taymiyah (1263-1328 CE). Their teachings undoubtedly show there were certain schools of thought among classical Muslim scholars discussing *Akhlāq*. The most prominent ethicists among them were Ibn Miskawayh and al-Ghazālī. Many efforts have been made to study their thoughts on *Akhlāq*. These studies reveal that Ibn Miskawayh and al-Ghazālī each uphold their own school of thought in *Akhlāq* although there are also some points of convergence.

Most studies in Islamic ethics recognise Ibn Miskawayh as the first Muslim scholar to initiate comprehensive writing on *Akhlāq*. According to Umaruddin, it was Ibn Miskawayh who made the first systematic attempt in the field of *Akhlāq* with his famous book *Tahdhib al-Akhlāq*'[24] Ibn Miskawayh was influenced by Greek ethics although his approach was apparently unlike that of al-Kindī (801-873 CE) and al-Fārābī. His book *Tahdhib al-Akhlāq* was the first treatise embodying the ethical views held by the Greeks and the ethical system in Islam.[25] In *Tahdhib al-Akhlāq*, he stuck to al-*Qur'ān* to explain his argument about ethical topics. Fakhry, however, still places him alongside al-Kindī, al-Fārābī and Ibn Sinā (980-1073 CE) in the school of thought that upholds philosophical theories.[26]

On the other hand, al-Ghazālī, who was famous for opposing al-Kindī, al-Fārābī and Ibn Sinā, took a different approach. Basically, al-Ghazalī's ethics were

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[24] M. Umaruddin, *The Ethical Philosophy of al-Ghazzali* (Delhi: Adam Publisher and Distributors, 1962), 71.

[25] *Ibid.*, 71

[26] Majid Fakhri, *Ethical Theories in Islam*, 2nd Edition (Leiden: E.J. Brill, 1994), 6-7.

inherited from predecessors like al-Ash`ārī, al-Bāqillānī and al-Juwaynī and countered *al-Mu`tazilah*'s school of thought. Al-Ghazālī went further, however, and made a response to Greek ethics, before combining Ṣufism as an important element in his ethics. According to Umaruddin, Al-Ghazālī's position in *Akhlāq* was unique because he recognised various sources but presented them in new forms that paralleled Islamic principles.[27] Al-Ghazālī's ethics blended the scriptural, theological and philosophical, including Sufism, and is categorised by Fakhry as religious ethics.[28]

The difference between Ibn Miskawayh and al-Ghazālī indicates that there are certain schools of thought in *Akhlāq*, at least two of which are represented by Ibn Miskawayh and al-Ghāzalī. According to Hourani, the discourse of ethics in medieval Islamic tradition was left by the jurists to theologians, so that it was among them that the fundamental issues of ethics were debated most extensively.[29] He identified two schools of thought in medieval Islamic tradition participating in ethical discourse; al-Ashā`irah and al-Mu'tazilah.[30] Hourani's classification is only applicable, however, within a theological periphery and is limited to the period of al-Ashā`irah and al-Mu`tazilah polemic. Apart from al-Ashā`irah and al-Mu'tazilah, Khallāf suggests al-Māturidiyah as another school of thought.[31]

In this context, Fakhry suggested that there are four schools of thought in *Akhlāq*: Scriptural Morality, Theological Theories, Philosophical Theories and

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[27] Umaruddin, *The Ethical Philosophy of al-Ghazzali*, 73.

[28] Fakhri, *Ethical Theories in Islam*, 8.

[29] George F. Hourani, *Islamic Rationalism the ethics of `Abd al-Jabbār* (Oxford: Claredon Press, 1971), 3.

[30] *Ibid.*, 3

[31] `Abd al-Wahhāb Khallāf, *`Ilm Ūṣūl al-Fiqh* (Cairo: Dar al-`Aqidah, 2006), 80-81.

Religious Theories.[32] Fakhry's classification is possibly wider because it includes various subjects rather than only theology, and in my opinion his classification is more acceptable. Fakhry also acknowledges that Sufism might be regarded as another school of thought, although in his classification Sufism was part of or conditioned Religious Theories.[33] On the other hand, Ṣubḥī is inclined to classify Sufism as another school of thought because it has its own discourse related to principles and practices.[34] With reference to certain scholars like al-Ghazālī and Fakhr al-Din al-Rāzī (1149–1209 CE), it is hard to categorise their school as representative of Religious Theories or Sufism.

Basically, I propose that the classification of schools of thought in *Akhlāq* should be based on the established classification of schools of thought, referring to certain sects. In this regard, the classification of Muslim schools of thought that was proposed by al-Shahrasatānī in his book *al-Milal wa al-Nihal* is a good classification to apply to *Akhlāq*.[35] The classification will, however, be applicable neither to every situation nor to every time. Therefore, Hourani's classification is probably more suitable for his intended analysis but may not be suitable for Fakhry's analysis. In other words, every scholar proposes his/her own classification in order to fulfil his/her own analysis. Most of their classifications are still referring to the established classification proposed by classical scholars like al-Shahrasatāni.

In the contemporary discourse of ethics, many scholars tend to categorise ethical thought into the theory of values and the theory of duties. Certainly, this

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[32] Fakhry, *Ethical Theories in Islam*, 6-8.

[33] *Ibid.*, 8.

[34] Subhi, *al-Falsafah al-Akhlāqiyah fi al-Fikr al-Islami*, 31-37.

[35] Abī al-Fatḥ Muhammad Bin `Abd al-Karīm al-Shahrasatāni, *al-Milal wa al-Nihal* (Beirut: Dar al-Ma`rifah, 2001).

approach is not unfamiliar in *Akhlāq*, because *al-Qur'ān* and *al-Ḥadīth*, the main sources of Islamic teachings, have put great emphasis on explaining values and duties. The topic has also been discussed by most Muslim scholars interested in studying *Akhlāq*. Therefore, it is acceptable to apply this approach in order to link the contemporary discourse of ethics with various schools of thought in *Akhlāq*. For instance, the Axiological approach and Deontological approach can be applied in studying Islamic Environmental Ethics, which inevitably needs a combination of the classical thought of *Akhlāq* and the contemporary discourse of ethics.

5.2 Values and Duties in *Fiqh*

Though Hourani's assumption that *Fiqh* refers to ethics of action may not express the exact meaning of *Fiqh*, his assumption, however, is important to unveil the relationships of *Akhlāq* and *Fiqh* from the ethicist perspective. At least, his assumption provides the best answer to the question of how to practise or apply ethics according to the Islamic system of life? The contemporary discourse of ethics is moving forward beyond theoretical debate. Nowadays many ethicists start to discuss ethics in the sense of practical dimension, later on establishing a new discipline entitled applied ethics. Obviously, in the Islamic system of life, applied ethics or practice of ethics more likely refers to *Fiqh* rather than to *Akhlāq*. Thus, the discourse of ethics among contemporary Muslim scholars should extend beyond *Akhlāq*.

Bridging ethics and *Fiqh* will probably be an alternative for Muslim society in facing new challenges. Moreover, in response to current issues, contemporary Muslim scholars like al-Qaradhāwī have introduced various approaches in *Fiqh*. These approaches have been described by several terms such as *Fiqh al-Muwāzanah*, *Fiqh al-Awlawiyyāt*, *Fiqh al-`Aqalliyāt*, *Fiqh al-Waqi`* and *Fiqh al-Hadhārī*. Actually, these

approaches are not unfamiliar in *Fiqh*, because the development of *Fiqh* since the *Sahābah* (the Prophet's companions) period has shown such an evolution. The four prominent Schools or *Madhāhib* in *Fiqh* were part of *Fiqh* development. Each of the schools has its own approaches to formulating religious rules or *fatāwā* in order to answer new issues that did not exist in Muslim society before.

The variety of approaches shows the dynamic of *Fiqh* in facing new problems in Muslim life. According to Zaydān, Fiqh develops because of new problems in Muslim society forcing Muslim scholars to give solutions.[36] The emergence of *Madhāhib* in the second century of *hijrah* was caused by the expansion of the Muslim world, which inevitably unveiled Muslim society to face various customs and cultures.[37] In such a situation, Muslim scholars struggle to apply their knowledge of *al-Qur'ān* and *al-Sunnah* to formulate new approach in *Fiqh*. Their efforts not only bring benefits to Muslim society, but also make *Fiqh* relevant in every situation.

Qiyās is a very good example explaining the approaches invented by classical Muslim scholars to face new challenges. According to Izzi Dien, *Qiyās* literally means measurement, and technically it means designation of legal analogy or syllogism.[38] Applying *Qiyās* as an argument in *Fiqh* provides a systematic method to formulate *fatāwā* on a new problem or issue that has no definitive explanation in *al-Qur'ān* and *al-Ḥadīth*. Obviously, the idea of using analogical deduction or syllogism with the spirit of *al-Qur'ān* and *al-Sunnah* was a very brilliant approach initiated by classical Muslim scholars in the second century of *hijrah*. It was al-Shāfi`ī who was

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[36] `Abd al-Karīm Zaydān, *al-Madkhal li Dirāsah al-Sharī`ah al-Islāmiyyah* (Beirut: Mu'asasah al-Risalah, 2003), 118.

[37] *Ibid.*, 119.

[38] Mawil Izzi Dien, *Islamic Law from Historical Foundations to Contemporary Practice* (Edinburgh: Edinburgh University Press, 2004), 51.

responsible for the proper constitution of analogy as a form of systematic reasoning.[39] Positively, this initiative has brought great benefits to Muslim society as well as *Fiqh* development.

In addition, given that values and duties are already recognised in *Fiqh*, so that applying Axiological and Deontological approaches should not be unfamiliar. Similarly to *Qiyās*, the application of Axiological and Deontological in *Fiqh* has to conform to *al-Qur'ān* and *al-Sunnah* and is not solely based on rational and empirical reason. In order to apply Axiological and Deontological approaches in *Fiqh*, there is a need to identify all related topics of *Fiqh* that have convergence points with values and duties. Then these related topics should be compiled into two new topics; Principles of Value and Principles of Duty. Therefore, this approach is not inventing a new way of making religious rules or *fatāwā*, but applying a new method in using the recognised sources.

5.2.1 Principles of Value in *Fiqh*

The main sources of Islamic teachings, *al-Qur'ān* and *al-Ḥadīth*, have clearly explained the principles of value in order to guide not only Muslims but also the whole of humankind. In explaining value, *al-Qur'ān* and *al-Sunnah* use several terms such as *al-ma`rūf*, *al-birr*, *al-khayr* or *al-ṣalāḥ* to indicate positive value, and *al-munkar*, *al-ithm*, *al-sharr* or *al-fasād* to indicate negative value. Sometimes, *al-Qur'ān* and *al-Sunnah* give very descriptive explanations. For example, *al-Qur'ān* gives the explicit explanation of the term *al-bir* in *sūrah al-Baqarah* verse 177.[40] Therefore, *al-Qur'ān* and *al-Sunnah* obviously not only provide basic norms as

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[39] *Ibid.*, 52.

[40] *al-Qur'ān*, 2:177.

general guides in formulating comprehensive value system, but also a descriptive explanation of some particular values.

After the period of the Prophet (pbuh), the values in *al-Qur'ān* and *al-Sunnah* were discussed by the early generation of Muslim scholars. Probably the earliest documented discussion of values in *Akhlāq* was found in Ibn Miskawayh's *Tahdhīb al-Akhlāq*, for instance, the difference of *al-Khayr* and *al-Sa`ādah*.[41] As previously mentioned, Ibn Miskawayh's method in explaining his discussion was influenced by Greek ethics, even though it was still rooted in Islamic teachings. He defined *al-khayr* as anything that brings happiness in hereafter days.[42] Perhaps the way he defines *al-khayr* shows his general method in discussing values in his *Tahdhīb al-Akhlāq*.

Whereas in *Fiqh*, the discourse of values might be initiated by some scholars who were prominently named as *Ahl al-Ra'yi*, later on they were followed by Ḥanafī scholars. According to Zaydān, this school of thought was upheld by scholars from Kufah, Iraq, who practised *ijtihād* for a problem that has no explanation in *al-Qur'ān* and *al-Sunnah*.[43] They established a law or rule for such problems by recognising the use of *al-ra'yi* (personal reasoning) as long as there was no particular argument in *al-Qur'ān* and *al-Ḥadīth* that covered the problem.[44] Probably, they could not escape the exercise because one of their reasons for practising *ijtihād* was consideration of public interest or *maṣāliḥ*. There was, however, no documented text to prove that the discourse of values had occurred among them before the emergence of *madhāhib*.

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[41] Abī `Alī Aḥmad Bin Muḥammad Ibn Miskawayh, *Tahdhīb al-Akhlāq wa Tathīr al-A`rāq*, ed. Imād Ḥamūdī al-Hilālī (Baghdad: Manshurāt Talī`ah al-Nūr, 2005), 161-162.

[42] *Ibid.*, 161.

[43] Zaydān, *al-Madkhal li Dirāsah al-Sharī`ah al-Islāmiyyah*, 115.

[44] *Ibid.*, 116.

The most important period where the discourse of values started to be documented was the period of al-Shāfi`ī. It is broadly accepted that al-Shāfi`ī was the founder of *Usūl al-Fiqh* (principles of Islamic jurisprudence), the discipline in which the discourse of values has been inclusively discussed. According to Kamali, although there is a theory that *usūl al-fiqh* had existed long before al-Shāfi`ī, it was through the works of al-Shāfi`ī that *Usūl al-Fiqh* was articulated into a coherent body of knowledge.[45] Moreover, al-Shāfi`ī's book *al-Risālah* is widely acknowledged to be the first work which specifically discusses *Usūl al-Fiqh.*[46] After al-Shāfi`ī's *al-Risālah*, the discourse of values was widely discussed and documented, especially by Shāfi`i's jurists like al-Juwaynī and al-Ghazālī.

According to Kamali, there are two approaches to studying *Usūl al-Fiqh*, one of which is theoretical and adopted by Shāfi`ī's scholars and al-Mutakallimūn, and the other deductive, that is mainly attributed to Ḥanafī's scholars.[47] Al-Juwaynī, who wrote *al-Burhān fi Uṣūl al-Fiq*` and al-Ghazālī who wrote *al-Mustaṣfa fi Ilm al-Uṣūl* are placed in the theoretical camp. Basically, al-Shāfi`ī in *al-Risālah* has not directly discussed the principles of value, whereas al-Juwaynī in *al-Burhān* and al-Ghazālī in *al-Mustaṣfā* have inclusively discussed the topics in response to al-Mu'tazilah's principles of value. Moreover, al-Ghazālī discussed the principles of value in his other books *al-Mankhūl fi Ta'liqāt al-Uṣūl* and *al-Iqtiṣād fi al-I`tiqād.*

Starting from this period, the discourse of value in *Fiqh* has evolved in parallel with the development of *Usūl al-Fiqh.* Perhaps scholars of the theoretical approach among those who explored intensively the principles of value in *Fiqh* more than the

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[45] Mohammad Hashim Kamali, *Principles of Islamic Jurispridence* (Cambridge: Islamic Text Society, 1991), 3.

[46] *Ibid.*, 4.

[47] *Ibid.*, 7.

devotees of another approach to studying *Usūl al-Fiqh*. Among them were Abū al-Husayn al-Baṣrī (d. 1085 CE), al-Juwaynī, al-Ghazālī, Fakhr al-Dīn al-Rāzī and Ṣayf al-Dīn al-Āmidī (1156-1233 CE).[48] In *Usūl al-Fiqh*, the discourse of values has been mainly discussed in sub-topics *al-Aḥkām al-Shar`iyyah*, *Maṣlaḥah al-Mursalah*, *al-`Urf* and *Sadd al-Dharā`i*. Apart from these sub-topics, there are also some brief discussions of values in *Qawā`id al-Fiqhiyyah* or legal maxims like *al-ḍarār yuzāl*, which means any harm has to be removed.

5.2.1.1 Discourse of Values in *al-Aḥkām al-Shar`iyyah*

There is a topic in *Usūl al-Fiqh* discussing the concept of *al-ḥukm al-shar`ī* (divine rule or law) entitled *al-Aḥkām al-Shar`iyyah*. Generally, this topic discusses four sub-topics; *al-ḥākim*, about the supreme right of Allah the Almighty in setting rules, *al-ḥukm*, about the type of rules commanded by Him, *al-maḥkūm fīh* about the kind of actions justified by the rules, and *al-maḥkūm `alayh*, about whom the rules affect.[49] Most scholars who participate in discussing *Usūl al-Fiqh* cannot avoid comment on these issues. Actually, this topic integrates the three major disciplines of Islamic knowledge, which are *`Aqīdah*, *Sharī`ah* and *Akhlāq*. Therefore, the discourse of values becomes one of the important issues, especially in the sub-topic *al-ḥākim*.

There is a consensus that the origin of *al-ḥukm al-shar`ī* is Allah the Almighty, who is the only party possessing the supreme right to rule and give the law.[50] There are differing opinions, however, on the other two issues: first is it possible for humankind to know *al-ḥukm al-shar`ī* by using their reasoning without

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[48] *Ibid.*, 8.

[49] Khallaf, *`Ilm Ūṣūl al-Fiqh*, 79.

[50] `Abd al-Karīm Zaydan, *al-Wajīz fi Uṣūl al-Fiqh* (Beirut: Mu'assasah al-Risālah Nāshirūn, 2006), 55.

revelation or messenger? And if so, is it allowable to use reasoning to establish rules similar to *al-ḥukm al-shar`ī*?[51] Certainly, this discussion is not only related to *Fiqh* but also involves theological debate or *`Ilm al-Kalām*. The earliest scholars who participated in this debate were theologians like `Abd Jabbār al-Hamdhānī, Abū Husayn al-Baṣrī from the al-Mu'tazilah school, and al-Juwaynī and al-Ghazālī from the al-Ashā`irah school.

Such relationships were already discussed in the time of Abu Ḥanīfah and Mālik, before the Muslim theologians started to respond to the same topic.[52] After ancient Greek philosophy began to influence Muslim intellectualism in the third century of *hijrah*, the discussion on the relationships of *Kalām* and *Fiqh* became wider and deeper. The discussion was first inherited by Muslim theologians and then Muslim jurists. According to Khallāf, in answering both the issues mentioned earlier, Muslim theologians and jurists are divided into three schools of thoughts:[53]

a. al-Ashāi`rah

According to this school of thought, it is impossible to use reasoning to know *al-ḥukm al-shar`ī* except by guidance of *al-Qur'ān* and *al-Sunnah*. They claim that reasoning usually generates a variety of inconsistent views, so that certain actions are considered good by some and probably not by others. Therefore good or bad action is as decided in *al-Qur'ān* and *al-Sunnah*, which they call *Dalla al-Shāri`*.

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[51] *Ibid.*, 55.

[52] Izzi Dien, *Islamic Law from History Foundations to Contemporary Practice*, 27.

[53] Khallāf, *`Ilm Ūṣūl al-Fiqh*, 80-81.

b. al-Mu`tazilah

According to this school of thought, it is possible to use reasoning to know *al-ḥukm al-shar`ī* without the guidance of *al-Qur'ān* and *al-Sunnah*. Every single action that is done by obligated persons (*mukallaf*) reveals clearly its benefit and non-benefit. Therefore reasoning has an ability to consider the right and wrong of an action. Moreover, God does not reveal a law that cannot be justified by human intellect.

c. al-Māturidiyah

This is the middle way. According to this school of thought, normally reasoning has the ability to know the rights and wrongs of an action, especially an action that has tangible impact. Those who are mindful will know which action is righteous and which action is evil. It is not compulsory, however, that each divine rule or *al-ḥukm al-shar`ī* revealed by God must run parallel with reasoning, as there are certain divine rules that cannot be justified by the human mind.

Basically, these schools of thought explain the principles of value in *Fiqh* as debated also in *Kalām*. Most Muslim scholars (*jumhur*) uphold the al-Ashā`irah school of thought, and among them are jurists and theologians.[54] Zaydān, however, is inclined to agree with the al-Māturidiyah school of thought because this opinion is more acceptable in terms of both revelation and intellect.[55] Zaydān strengthens his opinion by giving two verses of *al-Qur'ān* as his arguments, verse 90 *sūrah al-Naḥl* and verse 157 *surah al-A`rāf*.[56] Another twentieth-century scholar, Khallāf, also

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[54] Zaydān, *al-Wajīz fi Uṣūl al-Fiqh*, 56.

[55] *Ibid.*, 57.

[56] *Ibid.*, 57

inclines to al-Māturidiyah's opinion.[57] Obviously, al-Māturidiyah's opinion is the middle one between the two extremes of al-Ashā`irah's opinion and al-Mu`tazilah's opinion.

Al-Ashā`irah and al-Māturidiyah agree that *al-ḥukm al-shar`ī* can be known by God's revelation through His messenger or prophet. Therefore, when Allah the Almighty commands us to do an action, this means the action is righteous, and when Allah the Almighty forbids an action, this means the action is evil. The difference between al-Ashā`irah and al-Māturidiyah is that the former does not recognise the capability of intellect to know the rights or wrongs of an action because all actions are not attributed by values, whereas the latter does recognise the capability of intellect to know the values of an action because every action is described as righteous or evil.

Conversely, al-Māturidiyah agrees with al-Mu`tazilah that every action is loaded with values, and intellect has the capability to know the right or wrong of an action. In other words, every action can be attributed righteous or evil because the action will normally result in benefit or harm, which can be justified by human intellect. Al-Māturidiyah disagrees, however, with al-Mu'tazilah in assuming that *al-ḥukm al-shar`ī* can be known by intellect without the guidance of revelations and messengers. He also opposes al-Mu`tazilah's opinion that whatever action is considered righteous by intellect because it yields a benefit, Allah the Almighty will command humankind to perform it and whatever action is considered evil by intellect because it causes harm, He will command humankind to avoid it.

Possibly al-Māturidiyah's opinion suggests better principles of value for Muslim society in facing new challenges, at the same time upholding *al-Qur'ān* and *al-Sunnah* as the main sources for proving right and wrong. Nowadays, *Fiqh* has to

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[57] Khallaf, *`Ilm Uṣūl al-Fiqh*, 81.

face many new problems related to current values such as environmental ethics and bio-ethics. Some of the problems do not have an absolute explanation in *al-Qur'ān* and *al-Sunnah*, but can be explained by the use of rational and empirical reasoning. Actually, these three schools of thought have their own principles of values regarding actions that have no adequate explanation in *al-Qur'ān* and *al-Sunnah*. The discourse of this issue will be extended later in sub-topic 4.3 with a focus on al-Ghazālī's opinion on the role of reasoning.

5.2.1.2 Discourse of Values in *Maṣlaḥah al-Mursalah*

The discourse of values can also be found in another topic of *Uṣūl al-Fiqh* entitled *al-Maṣlaḥah al-Mursalah*. Most Muslim jurists who take part in discussing *Uṣūl al-Fiqh* have allocated in their book a chapter related to this topic. Literally, *al-Maṣlaḥah* is defined by Zaydān as bringing benefit and avoiding harm.[58] The literal meaning of *al-Maṣlaḥah* shows the foundation of values in its discussion. According to Izzi Dien, the Arabic word *al-Maṣlaḥah* is derived from the root ṣ-l-ḥ, meaning restoration of good and removal of harm or corruption.[59] Moreover, the concept of public interest or public welfare is also included under the word *al-Maṣlaḥah*.[60] Because of its important role in bringing benefits and avoiding harm to the public, many Muslim jurists consider *al-Istiṣlāḥ* as an additional source of rules apart from *al-Qur'ān*, *al-Sunnah*, *Ijmā`* and *Qiyās*.

Indeed, the divine texts of Islamic teachings *al-Qur'ān* and *al-Sunnah* emphasise the restoration of good and removal of harm, hence the emphasis is

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[58] Zaydan, *al-Wajīz fi Uṣūl al-Fiqh*, 187.

[59] Izzi Dien, *Islamic Law from History Foundations to Contemporary Practice*, 69.

[60] *Ibid.*, 69

considered as the main purpose of God revealing *al-ḥukm al-shar`ī*. Therefore, most Muslim jurists divide *al-Maṣlaḥah* into three categories: first, *al-Maṣlaḥah al-Mu`tabarah* or the interest that is recognised by the divine texts; second, *al-Maṣlaḥah al-Mulghah* or the interest that is rejected by the divine texts; and finally *al-Maṣlaḥah al-Mursalah* or the interest that is not found in the divine texts.[61] In regard to this category, Khallāf defines *al-Maṣlaḥah al-Mursalah* as the interest that is not ruled out by divine rules and for which there is no explanation in divine texts either about its recognition or about its rejection.[62]

According to the Khallāf's definition, *al-Maṣlaḥah al-Mursalah* appreciates that human intellect can decide what is beneficial and what is harmful to humans in fulfilling their needs. *Sharī`ah* upholds this right because restoring benefit and removing harm are parallel with the wisdom of *al-ḥukm al-shar`ī*. In this context, Kamali proposes a more technical definition of *al-Maṣlaḥah al-Mursalah* as a consideration that is proper and harmonious with its role as Lawgiver, by which it secures benefit and prevents harm.[63] In other words, Kamali's definition suggests *Maqāṣid al-Sharī`ah* (the basic purpose of Islamic law) as the basic value in justifying benefits and harms. He apparently shows his agreement with al-Ghazali's opinion that *al-Maṣlaḥah al-Mursalah* should be in concert with *Maqāṣid al-Sharī`ah*.[64]

In addition, al-Ghazālī's teacher al-Juwaynī also used *Maqāṣid al-Sharī`ah* and *al-Maṣlaḥah al-`Āmmah* (public interest) interchangeably.[65] This tendency means

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[61] Zaydan, *al-Wajīz fi Uṣūl al-Fiqh*, 187-188.

[62] Khallaf, *`Ilm Uṣūl al-Fiqh*, 68.

[63] Kamali, *Principles of Islamic Jurispridence*, 267.

[64] *Ibid.*, 267

[65] Jasser Auda, *Maqāṣid al-Sharī`ah as Philosophy of Islamic Law a Systems Approach* (London: The International Institute of Islamic Thought, 2008), 2.

the main purpose of Islamic law is to restore benefit and to remove harm in fulfilling human essential needs (*ḍaruriyyāt*), complementary needs (*ḥajiyyāt*) and embellishment needs (*taḥsiniyyāt*). The relationships between *al-Maṣlaḥah al-Mursalah* and *Maqāṣid al-Sharī`ah* still do not provide the answer to the question of how to justify benefit and harm. Probably, this question has led some Muslim jurists to distinguish *al-Maṣlaḥah al-Mursalah* from *Maqāṣid al-Sharī`ah* or at least discuss these topics separately.

One could consider *`illah* as the basic values in justifying benefit and harm. In this context, Izzi Dien has written an interesting analysis of al-Shāshī's identification of two kinds of *`illah* or reason as the basic values of *al-Maṣlaḥah al-Mursalah*.[66] According to Izzi Dien, al-Shāshī identifies two kinds of *`illah*; the general, which he calls *Maṣlaḥah*, and the private, which he calls *Khāṣṣah*.[67] Recognising *`illah* as the basic values means applying the deduction of main objective of Islamic law as methodology of justification. The difference between this methodology and *Qiyās* is that the former considers the general form of *`illah* while the latter considers a specific form of *`illah*.[68] Thus, identifying a general form of *`illah* from divine texts is an important way to justify benefit and harm.

Apart from *`illah*, is there any possibility of justifying *Maṣlaḥah* by using reasoning or *`aql*? A classical Muslim jurist, Izz al-Ḍīn b. `Abd al-Salām, in his famous book *Qawā`id al-Aḥkām fi Maṣaliḥ al-Anām*, ascertains the possibility of reasoning or *`aql*. According to `Abd al-Salām, reasoning or *`aql* can justify *Maṣaliḥ*

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[66] Izzi Dien *Islamic Law from History Foundations to Contemporary Practice*, 71-72.

[67] *Ibid.*, 71-72

[68] *Ibid.*, 71-72

al-Dunyā or the benefit of human life in the world.[69] This opinion recognises the role of reasoning or *`aql* in knowing what is benefit and what is harm in human daily life as long as it is not related to devotional matter (*`ibādah*). Moreover, `Abd al-Salām acknowledges *al-ladhdhāt* (pleasure) and *al-afrāḥ* (happiness) as indicators of *Maṣlaḥah*.[70] He also considers *Maṣlaḥah* as similar to goodness, benefit and righteousness, while *Mafsadah* is similar to badness, harm and wrongness.[71] Possibly, this opinion not only recognises the role of reasoning or *`aql* but also recognises common values of human beings.

Clearly, `Abd al-Salām's opinion suggests that justification of *al-Maṣlaḥah al-Mursalah* or public interest is left to interpretation of humans through using their reasoning. It could be said, however, that this opinion could allow someone to justify *al-Maṣlaḥah al-Mursalah* based on his/her own desire to fulfil his/her own interest. Therefore, al-`Ālīm suggests that even though reasoning or *`aql* is permitted to justify *al-Maṣlaḥah al-Mursalah*, the justification must be to achieve the basic purpose of Islamic law, not to achieve individual desire (*shahawāt*).[72] Perhaps this is the middle way in recognising reasoning and common values in *al-Maṣlaḥah al-Mursalah*. Khallāf proposes three conditions in applying reasoning and common values:[73]

a. There is a certainty that the benefit will be restored or the harm will be removed according to truthful reasoning.

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[69] Abū Muḥammad `Izz al-Dīn `Abd al-Salām, *Qawā`id al-Aḥkām fī Maṣaliḥ al-Anām* (Beirut: Dar al-Kutub al-`Ilmiyah, 1999), 8.

[70] *Ibid.*, 12.

[71] *Ibid.*, 7-8.

[72] Yusuf Hāmid al-`Ālīm, *al-Maqāṣid al`Āmmah li al-Sharī`ah al-Islāmiyyah* (Riyadh: al-Dār al-`Ālamiyyah li al-Kitāb al-Islāmi), 139.

[73] Khallāf, *`Ilm Ūṣūl al-Fiqh*, 70.

b. The restoration of benefit and the removal of harm must be done in order to achieve public interest, not to achieve individual interest.

c. Application of *al-Maṣlaḥah al-Mursalah* must be in parallel with the principles of *al-hukm al-shar`ī* (divine rules) as well as conforming to the basic values of divine texts.

5.2.1.3 Discourse of Values in *al-`Urf*

There is another topic in *uṣūl al-fiqh* that can be related to the discourse of values, which is *al-`Urf* or custom. Literally, the term *al-`Urf* is derived from the root `a-r-f meaning to know, so that as a noun *al-`Urf* means something which is known.[74] Based on the literal meaning, usually *al`Urf* refers to custom or repetition. According to Kamali, *al-`Urf* is defined as a recurring practice which is acceptable to people of sound nature.[75] The recurring practice of a community can be either action or word. Zaydān defines *al-`Urf* as a custom that is usually practised by a community in their daily life including action and word.[76] Therefore, *al`Urf* is the recurring practice of a community, and it does not refer to recurring practice of an individual, that is usually known as habit.

According to the above definition, a values system that has been practised by a community from one generation to another is also considered as *al-`Urf.* Normally, every community or nation has their own values system, which means they

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[74] Kamali, *Principles of Islamic Jurispridence*, 283.

[75] *Ibid.*, 283

[76] Zaydān, *al-Wajīz fi Uṣūl al-Fiqh*, 201.

continuously uphold certain values to be applied in their daily life. It is well-known that pre-Islamic Arabia before the lifetime of the Prophet Muhammad (pbuh) had been practising certain customs including values in the community. Some of the customs that were not expressly overruled by the Prophet were later on accepted as *sunnah taqrīriyyah*.[77] In other words, some of the pre-Islamic Arabian customs were practised by the Muslim community with the approval of the Prophet (pbuh), and were considered as *al-hukm al-shar`ī*.

However, most Muslim jurists further classify *al-`Urf* as *al-`Urf al-Saḥīḥ* (valid custom) and *al-`Urf al-Fāsid* (invalid custom). According to Zaydān, *al-`Urf al-Saḥīḥ* is a custom that does not oppose divine texts, it does not remove benefit and it does not restore harm, while *al-`Urf al-Fāsid* is a custom that does oppose divine texts, it does remove benefit and it does restore harm.[78] Obviously, this classification indicates that the basis for justifying values is the divine texts, *al-Qur'ān* and *al-Sunnah*. If there is no explanation in *al-Qur'ān* and *al-Sunnah*, it should be conformed to the basic purposes of Islamic law. The justification of *al-`Urf* in Islamic jurisprudence is almost similar to the justification *al-Maṣlaḥah al-Mursalah*. Therefore, according to al-Qaradhāwī, guarding *al-`Urf* is part of guarding *al-Maṣlaḥah al-Mursalah*.[79]

Although most of the Muslim jurists only categorise *al-`Urf* as *al-`aml* (action) and *al-Qawl* (word), a value system that has been practised by a community is also included in the meaning of *al-`Urf*. In other words, Islamic jurisprudence does not totally reject any value system that has been practised by a community as long as

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[77] Kamali, *Principles of Islamic Jurisprudence*, 285.

[78] Zaydān, *al-Wajīz fi Uṣūl al-Fiqh*, 202.

[79] Yusuf al-Qaradhāwī, *Madkhal li Dirāsah al-Sharī`ah al-Islāmiyyah* (Cairo: Maktabah Wahbah, 2001), 169.

the value system complies with divine texts or conforms to the basic purposes of Islamic law. One of the arguments usually used by Muslim jurists to implement *al-`Urf* is a *ḥadīth* narrated by Ibn Mas`ūd: 'Whatever is considered good by the Muslim community, is considered good by Allah the Almighty'.[80] This is clearly referring to value systems, so it indicates that they are also included in the meaning of *al-`Urf* or custom. According to Zaydān, however, the *ḥadīth* narrated by Ibn Mas`ūd is considered as weak (*ḥadīth ḍa`īf*), and also to refer to *Ijmā`* not *al-`Urf*.[81]

The weakness of the argument is that it does not indicate whether the value system is excluded from *al-`Urf*. Perhaps *al-`Urf* itself can be considered as a type of value system because *al`Urf* is classified as *saḥīh* (right) and *fāsid* (wrong). It is generally accepted that *al-`Urf* or *al-`Ādah* are referring to custom that includes the recurrent practice of a community. Every community inherits certain values that are recognised as an element of their custom, and have been practised from one generation to another. Probably the inherited values are insufficient to establish a comprehensive value system, and hence those values are only considered as common values. Such values are also considered to be part of *al`Urf*, and are therefore also classified as *saḥīh* and *fāsid*.

Basically, *al-`Urf* is not an absolute argument in Islamic jurisprudence, and its application must conform to divine texts and the basic purpose of Islamic law.[82] Therefore, Kamali proposes four conditions for applying *al-`Urf* in Islamic jurisprudence:[83]

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[80] *Ibid.*, 169.

[81] Zaydān *al-Wajīz fi Uṣūl al-Fiqh*, 202.

[82] *Ibid.*, 202-203.

[83] Kamali, *Principles of Islamic Jurisprudence*, 286-287.

a. *Al-`Urf* or the custom must represent a common and recurrent phenomenon, which means the practice of an individual or a group of people within a large community will not be authoritative.

b. *Al-`Urf* or the custom must also be in existence at the time a transaction is concluded, not a custom that was practised in the past.

c. *Al-`Urf* or the custom must not contravene the clear stipulation of an agreement, because contractual agreement is considered stronger than custom.

d. *Al-`Urf* or the custom must not oppose *al-Qur'ān and al-Sunnah*, which are the definitive principles of Islamic law, otherwise the custom must be set aside.

5.2.1.4 Discourse of Values in *Sadd al-Dharā`i*

Another topic in *Uṣūl al-Fiqh* related to the discourse of values is *Sadd al-Dharā`i* (closing off the means). Based on my analysis, most explanations about the doctrine of *Sadd al-Dharā`i* can usually be traced to al-Shāṭibī (d. 1388 CE). Thus the first Muslim jurist who initiated the discussion of *Sadd al-Dharā`i* was probably al-Shāṭibī in his book *al-Muwāfaqāt fi Uṣūl al-Aḥkām.* According to Kamali, al-Shāṭibī has aptly observed that Allah the Almighty has legalised certain forms of conduct and prohibited others in accordance with the benefit and harm that they lead to.[84] In other words, every single conduct is a means to a particular end. Whenever a conduct leads

[84] Kamali, *Principles of Islamic Jurisprudence*, 312.

to a harmful ending, it is contrary to the objectives of the Lawgiver, and therefore it must be prevented.

Interestingly, the doctrine of *Sadd al-Dharā`i* shares some similar points with the theory of teleological ethics. Teleological ethics is a theory that takes ends as the basis for principles of conduct or a theory that the rightness of an action depends only on the value of consequences.[85] One of the theories that is considered as a sub-class of teleological ethics is Utilitarianism.[86] The doctrine of *Sadd al-Dharā`i* must, however, necessarily be understood to imply closing off the means to evil, not to something good.[87] The Arabic term *Sadd* literally means blocking or closing off, thus it directly indicates the prevention of evil or harm ending, not otherwise.[88] Because of some similarities, the doctrine of *Sadd al-Dharā`i* can be considered as a discourse of values in *Uṣūl al-Fiqh*.

Moreover, *Sadd al-Dharā`i* apparently emphasises the consequence of an action similarly to the ethics of consequentialism.[89] According to al-Shāṭibī, *Sadd al-Dharā`i* is built on the maxim that Allah the Almighty has legalised certain actions but they are prohibited because of the harm that they lead to, and He has prohibited certain actions but they might be done because of the benefit they lead to.[90] In this regard, al-Shāṭibī names the future outcomes of the action of individuals as *ma'ālāt*

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[85] Mautner, Thomas ed., *The Penguin Dictionary of Philosophy* (London: Penguin Books Ltd, 2000), p. 558.

[86] *Ibid.*, 558

[87] Kamali, *Principles of Islamic Jurisprudence*, 310.

[88] *Ibid.*, 31

[89] Consequentialism refers to the ethical theory that a good action is one that produces a good outcome, while a bad action is one that produces a bad outcome. The consequentialists assess actions by the extent to which they further the desired goals. See Peter Singer, *Writings on the Ethical Life* (London: Fourth Estate, 2002), 8.

[90] Abū Ishāq Ibrāhīm al-Shātibī, *al-Muwāfaqāt fi Uṣūl al-Ahkām*, Vol. 4 (Cairo: Dar al-Fikr, no date), 112.

al-af'al.[91] Clearly, al-Shāṭibī justified the means according to the ends that they lead to, whether benefits or harms. Beneficial ending and harmful ending must, however, be decided by reference to *al-Qur'ān* and *al-Sunnah*. Thus, an action is considered good if it leads to a beneficial ending and it is considered bad if it leads to a harmful ending.

In other words, in al-Shāṭibī's opinion, *Sadd al-Dharā`i* may also apply to something beneficial, not only to blocking the means to harm. According to Kamali, although the literal meaning of *Sadd al-Dharā`i* is understood to imply blocking the means to evil, in its juridical application the concept also extends to opening the means to benefit.[92] According to Zaydān, however, Sadd *al-Dharā`i* is only applied to block the means that lead to a harmful ending.[93] Actually, the doctrine of *Sadd al-Dharā`i* should be considered as a special topic in *Uṣūl al-Fiqh* that focuses on the prevention of harm or evil, so that Zaydān's opinion is probably more acceptable. Kamali seems to agree with this, as he remarked: 'Opening the means to beneficence is the true purpose and function of the *Sharī'ah* and as such is not peculiar to *Sadd al-Dharā`i*'.[94] What is important is that the doctrine of *Sadd al-Dharā`i* clearly emphasises the principles of value, by which an action can be determined as either good or bad by consideration of the consequence of the action.

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[91] Izzi Dien, *Islamic Law from History Foundations to Contemporary Practice*, 62. See also al-Shātibī, *al-Muwāfaqāt fi Uṣūl al-Ahkām*, Vol. 4, 110.

[92] Kamali, *Principles of Islamic Jurisprudence*, 310.

[93] Zaydān, *al-Wajīz fi Uṣūl al-Fiqh*, 195.

[94] Kamali, *Principles of Islamic Jurisprudence*, 310.

5.2.2 Principles of Duty in *Fiqh*

One of the main purposes of *Sharī`ah* is to reveal the commandments to be followed by humankind. According to Islamic teachings, every single person who is considered as a *mukallaf* (obligated person) is obliged to perform every commandment and to avoid every forbidden thing that has been revealed in *al-Qur'ān* and *al-Sunnah*. The commandments and prohibitions are not only related to humans' obligation to Allah the Almighty, but also their obligation to themselves and their obligation to other creatures. Every single action of a *mukallaf* will be evaluated by Allah the Almighty according to his loyalty in performing those commandments and in avoiding those prohibitions. Certainly, this is the basic principle of duty in Islamic teachings that must be upheld by every Muslim.

The divine texts *al-Qur'ān* and *al-Sunnah* are considered as the main sources of knowledge about commandments and prohibitions in Islamic teachings. In *al-Qur'ān*, there are many verses related to duties, from worship to politics. According to Cook, one of the most repeated commandments and prohibitions in al-Qur'an is *al-amru bi al-ma`rūf wa al-nahyu `an al-munkar* (commanding right and forbidding wrong), which clearly indicates the concept of duty or obligation.[95] In this sense, performing commandments of Allah the Almighty and avoiding what He has forbidden is considered piety, whereas neglecting the commandments of Allah the Almighty and committing what He has forbidden is considered sin.

Similarly to *al-Qur'ān*, in *al-Sunnah* there are many observations from the Prophet Muhammad (pbuh), explaining the duties of a Muslim. These include the fundamentals, such as the five pillars of Muslim duties (*arkān al-Islām*), and the peripheral ones such as bringing water to a thirsty dog. As the second source of

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[95] Michael Cook, *Commanding Right and Forbidding Wrong in Islamic Thought* (Cambridge: Cambridge University Press, 2000), 13-14.

Islamic knowledge after *al-Qur'ān*, *al-Sunnah* adds to the explanations of *al-Qur'an* by establishing the complete list of duties which must be performed by every individual (*fard al-`ayn*) and community (*fard al-kifāyah*). Therefore, a declaration of commitment by a Muslim to perform commandments and to avoid prohibitions is the real purpose of *shahadatayn* and also the core meaning of *al-Islām* (submission).

Perhaps, in the early development of *Fiqh*, most of the discussion was focused on duties. According to Zaydān, the development of *Fiqh* started during the period of *Ṣahābah* (Prophet's companions) whenever Islamic territory expanded beyond the Arabian peninsular.[96] The variety of culture and custom had led the Prophet's companions to adapt *Sharī`ah*, that also contained regulations of Muslim duties, to the new circumstances.[97] In addition to *al-Qur'ān* and *al-Sunnah* as the main sources, they also practised *ijtihād*, either through individual opinion or congregational consultation, to fit the new requirements. Among their *ijtihād* were the suspension of the share of *mu'allaf* (the people whose hearts need to be reconciled) and the suspensions of punishment for theft by the second caliph, `Umar ibn al-Khattāb.[98]

The more systematic discourse of duties probably started during the period of Abū Ḥanīfah, who discussed the principles of duty by classifying obligation as *farḍ*, *wājib*, *mandūb*, *ḥarām*, *makrūh taḥrīm*, *makrūh tanzīh* and *mubāḥ*.[99] It is accepted that Abū Ḥanīfah's classification is quite different from the rest of major opinion. Obviously, Abu Hanifah's classification indicates that Muslim jurists had already discussed the principles of duty before al-Shafi`ī wrote the first treatise of *Uṣūl al-*

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[96] Zaydān *al-Madkhal li Dirāsah al-Sharī`ah al-Islāmiyah*, 99.

[97] *Ibid.*, 99

[98] Izzi Dien, *Islamic Law from History Foundations to Contemporary Practice*, 6.

[99] Wahbah al-Zuḥaylī, *al-Fiqh al-Islāmī wa Adilatuhu*, Vol. 1 (Damascus: Dār al-Fikr, 2007), 67.

Fiqh, al-Risālah.[100] The other schools of thought proposed different classifications, which classified obligation into *wājib*, *mandūb*, *ḥarām*, *makrūh* and *mubāḥ.*[101] Therefore, the discourse of duties in *Fiqh* started as early as the second century of *hijrah* or even earlier.

Then, after this period, the discourse of duties in *Fiqh* entered a new phase, when the debate of theology or *`Ilm al-Kalām* began to influence *Uṣūl al-Fiqh.* Like the discourse of values, the discourse of duties in *Fiqh* at that time was also influenced by the debate between al-Mutakallimūn and al-Mu`tazilah. This tendency appeared in al-Ghazālī's famous treatise of *Kalām, al-Iqtiṣād fi al-I`tiqād,* when he discussed the concept of *wājib* by using a theological approach.[102] Actually, al-Ghazālī discussed this concept in order to explain Allah's action towards His creatures. According to Hourani, the meaning of al-Ghazālī's *wājib* here is not referring to obligation but has other connotations.[103] Moreover, al-Ghazālī also discusses the meaning of *wājib* in relation to *ḥasan* (good) and *qabīh* (evil), thus proving his use of a theological approach.

Some Muslim jurists perceive that *Shari`ah* or Islamic Law itself is meant to fulfil some duties related to human necessities. According to them, *Shari`ah* is revealed by Allah the Almighty (as a Lawgiver) to have certain purposes to ensure humankind can meet their necessities, and these purposes are also known as *Maqāṣid al-Shari`ah.* According to Auda, the discourse of *Maqāṣid al-Shari`ah* in *Uṣūl a-Fiqh*

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[100] Muhammad bin Idris al-Shafi`ī, *al-Risālah*, ed. Ahmad Muhammad Shakir (Beirut: al-Maktabah al-`Ilmiyyah, 1939)

[101] Zaydān, *al-Wajīz fi Uṣūl al-Fiqh*, 27

[102] Abū Ḥāmid Muḥammad al-Ghazālī, *al-Iqtiṣād fi al-I`tiqād* (Beirut: Dar al-Maktabah al-Hilal, 1993), 184-186.

[103] Hourani, "Ghazali on Ethics of Action", 71.

was purposely initiated by al-Juwaynī in his *al-Burhān fi Uṣūl al-Fiqh*.[104] In his *al-Burhān*, al-Juwaynī proposed that the purpose of *Sharī`ah* is to protect human needs including religion, life, intellect, lineage and property.[105] In this regard, *Maqāṣid al-Shari`ah* also can be considered as part of the discourse of duties in *Uṣūl al-Fiqh* besides the classification of obligation (*hukm al-taklīf*).

5.2.2.1 Discourse of Duties in *al-Aḥkām al-Shar`iyyah*

The main topic in *Uṣūl al-Fiqh* discussing principles of duty is *al-Aḥkām al-Shar`iyyah*. As has been explained before, this topic consists of four sub-topics, which are *al-ḥākim*, *al-ḥukm*, *al-maḥkūm fīh* and *al-maḥkūm `alayh*.[106] The principles of duty are mostly discussed in *al-ḥukm*, that is about the type of rules commanded by Allah the Almighty. According to Khallāf, *al-ḥukm* is *khiṭāb* or messages from the Lawgiver addressing the conduct of *al-Mukallaf* or the obligated person, and consists of a demand, an option and an enactment.[107] Based on this explanation, the duties that are imposed on humankind are obligated by Allah the Almighty as the Lawgiver. In other words, it is Allah the Almighty who decides the duties of humankind on the Earth.

In fact, Allah the Almighty has revealed the duties of humankind in His holy book *Qur'ān*, and the duties have been explained further by the Prophet (pbuh) in *al-Sunnah*. In other words, *al-Qur'ān* and *al-Sunnah* are the main sources explaining the duties that should be followed by humankind. Therefore, *al-Qur'ān* and *al-Sunnah*

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[104] Auda, Jasser, *Maqāṣid al-Shari`ah as Philosophy of Islamic Law a Systems Approach*, 17.

[105] Abu Ma`āli `Abd al-Mālik bin `Abdullah al-Juwaynī, *al-Burhān fi Uṣūl al-Fiqh*, Vol. 2, ed. `Abd al-`Āẓim al-Deeb (Egypt: al-Wāfa', 1998), 621-622.

[106] Khallaf, *`Ilm Ūṣūl al-Fiqh*, 79.

[107] *Ibid.*, 82. See also Kamali, *Principles of Islamic Jurisprudence*, 321.

can be considered as the supreme principles of duty in Islamic ethics. As has been explained in sub-topic 2.2.2.1, in Kantian ethics Categorical Imperative is defined as the supreme principle of morality that stops an action contradicting universal laws.[108] In the Islamic perspective, it is the role of *al-Qur'ān* and *al-Sunnah* to reveal the supreme principles of duty to guide human conduct.

Furthermore, in the Islamic faith, it is Allah the Almighty who reveals the supreme principle of duties in divine texts, and He also establishes the universal laws to control the universe movement and its function. Thus, the supreme principle of duty and the universal laws are complementary each to another. In this regard, Allah the Almighty said in the holy book *Qur'ān* that all in the heavens and also on the earth are subject to His laws, and they have no choice but to obey the laws.[109] In the modern context, the universal laws are discovered by scientific research and are classified into certain disciplines of knowledge such as Biology, Chemistry and Physics. Such a relationship indicates that the Islamic principle of duties will guide humans not to act against universal laws, because the laws also come from the Lawgiver.

According to Zaydān, *khiṭāb* or messages from the Lawgiver refer directly to *al-Qur'ān* and indirectly to the means of understanding *al-Qur'ān* that are *al-Sunnah*, *Ijmā`* and other sources of *Sharī`ah*.[110] In other words, besides *al-Qur'ān*, other sources of *Sharī`ah* also help to explain the principle of duties that has been revealed by Allah the Almighty in His holy book. Certain duties can be known clearly and directly from *al-Qur'ān*, while other duties can only be known by the explanations

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[108] Bullock and Trombley, *The New Fontana Dictionary of Western Thought*, 108.

[109] *al-Qur'ān*, 3 : 83.

[110] Zaydān, *al-Wajīz fi Uṣūl al-Fiqh*, 23.

and interpretations of Muslim jurists using these sources. In this context, Ḥanafī's scholars categorise the duties into the duties that are proven by *dalīl qaṭi`ī* (definitive proof), and the duties that are proven by *dalīl ẓannī* (non-definitive proof).[111] Perhaps this is the main difference among Muslim jurists' perceptions of the principle of duties in Islamic ethics.

Ḥanafī's scholars classify the category of duties into *farḍ, wājib, mandūb, ḥarām, makrūh taḥrīm, makrūh tanzīh* and *mubāḥ.*[112] On the other hand, other schools classify the category of duties into *wājib* (obligatory), *mandūb* (desired), *mubāh* (permissible), *makrūh* (reprehensible) and *harām* (forbidden).[113] Basically, all human conduct can be categorised as *wājib* or *mandūb* or *mubāh* or *makrūh* or *harām.* According to the category, every lawful action will be rewarded by Allah the Almighty in the hereafter days, while every sinful action will be punished by Him. Thus, in the hereafter days, every Muslim will responsible before Allah the Almighty for whatever she/he has done in her/his life. This category of duties is known as *al-ḥukm al-taklifi* or obligatory rule in *Uṣūl al-Fiqh.*

Apart from *al-ḥukm al-Taklifi*, there is another kind of rule related to the principles of duty, that is, *al-ḥukm al-waḍ`ī* or conditional rule. According to Kamali, *al-ḥukm al-waḍ`ī* is defined as a message from the Lawgiver which describes something as a cause (*sabab*), a condition (*sharṭ*) or a hindrance (*māni`*) to something else.[114] Perhaps *al-hukm al-waḍ`ī* does not directly relate to the principles of duty but there are some convergent points between *al-hukm al-waḍ`ī* and Hypothetical

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[111] Kamali, *Principles of Islamic Jurisprudence*, 321.

[112] al-Zuḥaylī, *al-Fiqh al-Islāmī wa Adilatuhu*, Vol. 1, 67.

[113] Zaydān, *al-Wajīz fi Uṣūl al-Fiqh*, 27.

[114] Kamali, *Principles of Islamic Jurisprudence*, 335.

Imperative in Kantian ethics. In other words, the discourse of *al-hukm al-waḍ`ī* should be applied to contemporary human duties by means of the concept of *sabab*, *sharṭ* and *māni`*. The application of *sabab*, *sharṭ* and *māni`* should not be restricted only to the existing rules, but can be applied to formulate new tasks that can be considered as human duties.

5.2.2.2 Discourse of Duties in *Maqāṣid al-Sharī`ah*

Another topic in *Uṣūl al-Fiqh* that can be related to the principles of duty is *Maqāṣid al-Sharī`ah*. In fact, the topic has attracted so many Muslim scholars that it is almost like an independent discipline in *Fiqh*. Most Muslim scholars assume that the topic of *Maqāṣid al-Sharī`ah* was firstly formulated by al-Shāṭibī, as Ibn Ashur wrote: 'Whoever investigates the theme of *maqaṣid* will note that what was written on this subject by scholars who came after al-Shāṭibī was limited either to summarizing or rearranging what al-Shāṭibī had already formulated'.[115] According to Auda, however, it was al-Juwayni who was one of the earliest contributors to this topic, as he used *al-Maqaṣid* and *al-Maṣāliḥ al-`Āmmah* interchangeably.[116]

Literally, *Maqāṣid al-Sharī`ah* means the objectives or the purposes behind Islamic ruling.[117] In other words, *Maqāṣid al-Sharī`ah* refers to the purposes of the Lawgiver (Allah the Almighty) in legalising Islamic rules or laws. According to al-Qaradhāwī, the majority of Muslim scholars agree that most of the Islamic laws have their objectives or purposes, which can be understood and recognised by reasoning.[118]

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[115] Gamal Eldin Attia, *Towards Realization of the Higher Intents of Islamic Law* (London: The International Institute of Islamic Thought, 2007), 1.

[116] Auda, *Maqāṣid al-Shari`ah as Philosophy of Islamic Law a Systems Approach*, 2.

[117] *Ibid.*, 2.

[118] al-Qaradhāwī, *Madkhal li Dirāsah al-Sharī`ah al-Islāmiyyah*, 57.

Al-Qaradhāwī added that at the least the undoubted objectives of Islamic laws are to gain benefits (*maṣāliḥ*) and to avoid harms (*mafāsid*).[119] Muslim scholars usually perceive *Maqāṣid al-Sharī`ah* as a method to formulate religious rule, but from another angle it can also be used to formulate religious duty.

The objectives of Islamic laws obviously indicate that every Muslim has to strive to achieve these objectives whenever they perform a related religious duty. For instance, the purpose of *Ṣawm* or fasting is to develop consciousness of God the Almighty (*taqwa*), so that developing consciousness is considered as a duty of those who perform fasting. Classical Muslim scholars usually classified *Maqāṣid al-Sharī`ah* into three levels of necessity, which are essential needs (*ḍaruriyyāt*), basic needs (*hajjiyāt*) and accessory needs (*taḥsiniyyāt*).[120] The ultimate objectives of Islamic laws are to secure essential needs including religion, life, intellect, lineage and property.[121] In the context of principles of duty, achieving such objectives can be considered as a duty not only for a lawmaker but also for an individual.

The above analysis on the principles of value and the principles of duty in *Uṣūl al-Fiqh* indicates that it is possible to apply contemporary ethical approaches in *Fiqh*. Contemporary ethical analysis usually applies an Axiological approach and a Deontological approach in facing current issues such as science, technology and environment. In fact, such approaches are already practised in Islamic jurisprudence, as has been explained in the above analysis. Among the approaches are *Maqāṣid al-Sharī`ah*, *al-hukm al-taklifī*, *al-hukm al-wad`ī*, *Sadd al-Dharā`i*, *al-`Urf* and *al-*

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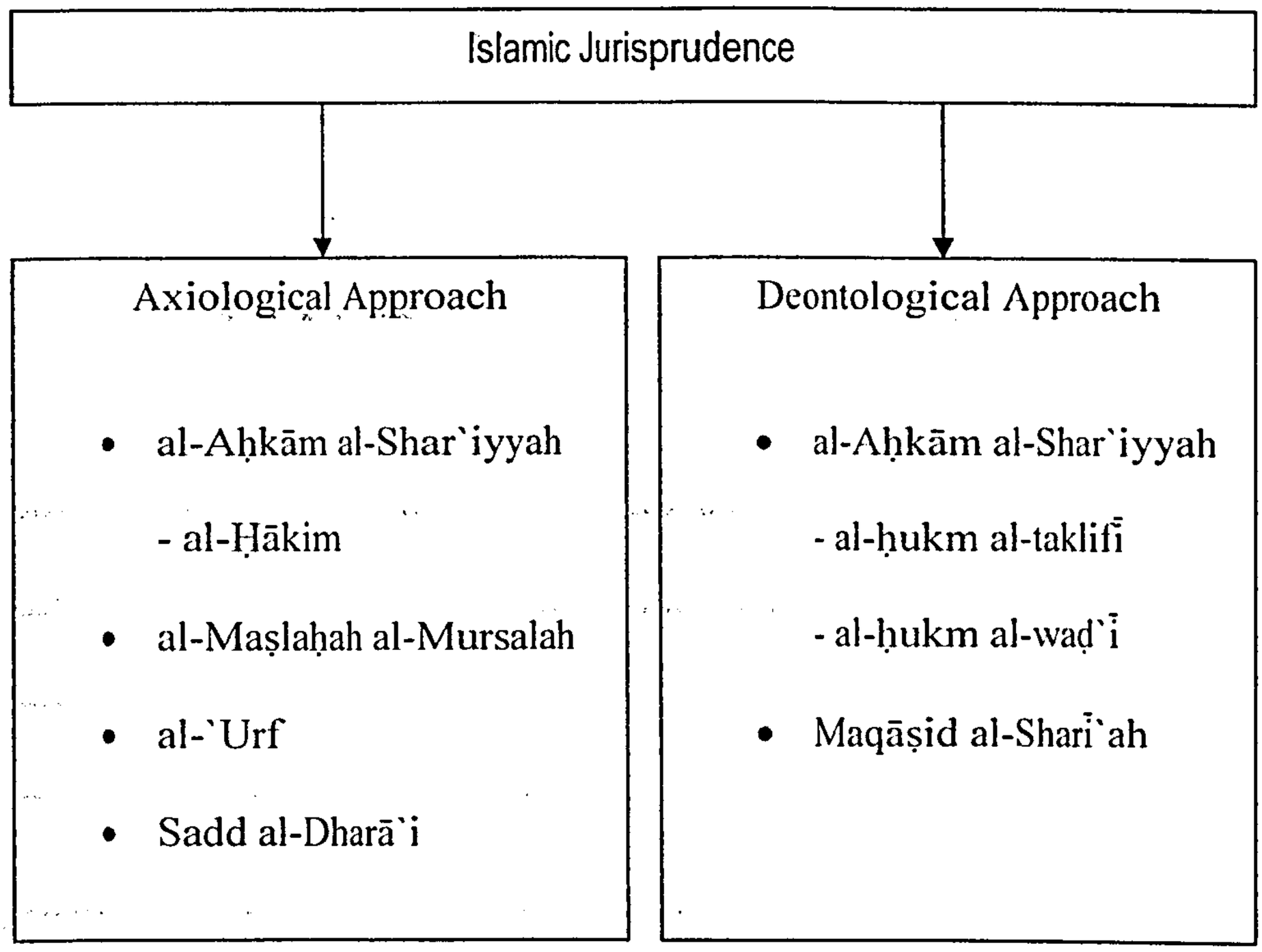
[119] *Ibid.*, 57.

[120] Auda, *Maqāṣid al-Shari`ah as Philosophy of Islamic Law a Systems Approach*, 3.

[121] al-Juwaynī, *al-Burhān fi Uṣūl al-Fiqh*, Vol. 2, 621-622.

Maṣlaḥah al-Mursalah. The figure below illustrates the general idea of applying Axiological and Deontological approaches to Islamic jurisprudence.

Figure 5.1



Application of Axiology and Deontology in Islamic Jurisprudence

5.3 Al-Ghazālī's Perspective on the Role of Reasoning

In order to know more about the relationships of ethics and laws in Islamic jurisprudence, it is necessary to study the views of a prominent Muslim scholar, al-Ghazālī, whose work has had great impact on this issue. Perhaps the relationships of

ethics and laws in Islamic jurisprudence come down to one question: what is the role of reasoning in *Uṣūl al-Fiqh*? In the context of this analysis, al-Ghazālī is chosen because his thoughts may represent the moderate group of Muslim scholars in responding to the question about the role of reason. Generally, the jurist group from *Ahl al-Ḥadīth* like Ibn Taymiyah represents the conservative group of Muslim scholars, while the jurist group of Muslim philosophers like Ibn Rushd represents the liberal one. I suggest that al-Ghazālī represents the moderate group, although he was among the scholars who consistently stood against philosophers.

Apart from this, al-Ghazālī also represents the al-Ashā`irah school of thought in *`Ilm al-Kalām*. As discussed in sub-topic 5.2.1.1, according to al-Ashā`irah, it is impossible to use reasoning to know *al-Ḥukm al-shar`ī* except by guidance from *al-Qur'ān* and *al-Sunnah*. They claim that reasoning could not be used to justify good or bad, but that good or bad is decided by *al-Qur'ān* and *al-Sunnah*, which they call *Dalla al-Syāri`*. Basically, as a follower of al-Ashā`irah, al-Ghazālī surely upheld this opinion, but did he continuously reject the role of reasoning? It is important to analyse al-Ghazali's standpoint in order to know to what extent he was reluctant to accept reasoning, especially in *Uṣūl al-Fiqh*? Knowing al-Ghazālī's standpoint may explain the possibility of using scientific arguments in *Uṣūl al-Fiqh* especially in the face of contemporary challenges such as environmental issues.

5.3.1 Brief Biography of al-Ghazali

Among Muslim scholars, al-Ghazālī is perhaps the most prominent one whose books and views have attracted many scholars from the East and the West to study his legacy. There are many scholars who uphold and defend his school of thought just as there are many scholars who criticise and condemn him. His books, especially *Ihya*

`Ulūm al-Dīn, have been translated into many languages and have had great impact on Muslim society from his time until the present day. He was among the first Muslim scholars who initiated the response to Greek philosophy including ethics. He was also among the first Muslim scholars who wrote books specifically discussing Islamic jurisprudence, and one of his books related to this subject is *al-Mustaṣfā min `Ilm al-Uṣūl*. Therefore, studying his ideas is very important to those who want to understand the relationships of ethics and law in Islamic jurisprudence.

Abū Hāmid Muḥammad bin Muḥammad al-Ghazālī is one of the most prominent Muslim jurists, theologians, philosophers and mystical thinkers. He was born in Tus, which is located in the northern part of Iran, and received his first lesson in traditional Islamic knowledge there. He mastered various branches of Islamic knowledge and wrote many books relating to that knowledge. His versatility in Islamic knowledge was recognised by Nizam al-Muluk, vizier of the Seljuq Sultans, and thus he appointed al-Ghazālī as Head of Madrasah Niẓāmiyyah in Baghdad in 1091 CE. Some years later, however, al-Ghazālī experienced a spiritual conflict that led him to leave his position at Madrasah Niẓāmiyyah and to make a spiritual journey to Syria and Palestine. He completed his journey with a pilgrimage to Mecca before he returned to his hometown of Tus, where he devoted most of his life to writing, practising Ṣufī and disseminating knowledge.

Al-Ghazālī wrote many of the greatest books on various branches of Islamic knowledge. He wrote some books in *'Aqīdah* and *`Ilm Kalām* such as *al-Iqtiṣād fi al-I`tiqād* and *al-Munqidh min al-Dalāl*, discussing Islamic faith and principles of belief. As a Shāfi`i's jurist, al-Ghazālī also wrote many books on *Sharī`ah* or *`Ilm al-Fiqh* such as *al-Mustaṣfā min 'Ilm al-Uṣūl* and *al-Basīṭ*. Al-Ghazālī mastered in *Akhlāq* as he wrote some books on this topic such as *Bidāyah al-Hidāyah*, *Kimya al-Sa`ādat* in

Persian and *Al-Ādab fi al-Dīn*. Among his books, *Iḥyā' `Ulūm al-Dīn* is acknowledged as the noblest and greatest one, in which his knowledge of *Aqīdah*, *Sharī`ah* and *Akhlāq* are consolidated.

As mentioned previously, Islamic teachings consist of *Aqīdah*, *Sharī`ah* and *Akhlāq* which establish the Islamic system of life. Because of his great contribution to these three branches of knowledge, Muslim scholars always consider Al-Ghazālī's views whenever they discuss any issues related to Islam. Al-Ghazālī himself was always interested in the relationship of *`Aqīdah*, *Sharī`ah* and *Akhlāq* when he discussed an issue, especially in his book *Ihya'`Ulūm al-Dīn*. For instance, in *Ihya 'Ulum al-Din* he did not merely consider *Sharī`ah* aspects when discussing the chapter of purification (*Bāb al-Ṭahārah*) as other jurists usually did, but also linked his explanation to *`Aqīdah* and *Akhlāq*.[122] He divided purification into four levels, which obviously combined all these three aspects of *Aqīdah*, *Sharī`ah* and *Akhlāq*.[123] Perhaps such a holistic approach should be highlighted in formulating Islamic standpoints on contemporary issues such as Environmental Ethics.

5.3.2 Al-Ghazali's View on Reasoning

As a Shafi`ī jurist, al-Ghazālī adopted the Shafi`ī approach in formulating religious rules. Shafi`ī's theory of jurisprudence recognises voluntarism as well as predestination.[124] Voluntarism here means that the behaviour of man is determined by individual choice in decision-making.[125] Clearly, it was the basic idea in al-Ghazālī's

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[122] Al-Ghazālī, *Iḥyā' `Ulūm al-Dīn*, Vol. 1, 190-206.

[123] *Ibid.*, 190–191.

[124] Hourani, 'Ghazali on the Ethics of Action', 77-78.

[125] Bullock and Trombley, *The New Fontana Dictionary of Western Thought*, 912.

approach to discussing the relationship of ethics and laws. In Islamic tradition, voluntarism is very close to the concept of *mukallaf*, which means the person who is capable of distinguishing good things from bad things is obliged to follow religious commands and avoid religious prohibitions.[126] Therefore, he deserves to receive reciprocal treatment from Allah the Almighty because of his choice to do or not to do something. This concept is the basic principle of human conduct in Islamic regulations as well as in Islamic Ethics.

According to the concept of *mukallaf* and *taklīf*, human conduct will be judged by Allah the Almighty whether it is good (*ḥasan*) or bad (*qabiḥ*). Good actions or bad actions are, however, determined by *Sharī`ah*, which main sources are *al-Qur'ān* and *al-Sunnah*.[127] In addition to these sources, al-Ghazālī also accepted *Ijmā`* and *al-Istiṣḥāb*. Although al-Ghazālī was usually seen to be against al-Mu'tazilah scholars in exalting reasoning (*`aql*)) to determine good and bad, he tolerated *al-Istiṣḥāb*.[128] According to al-Ghazālī, although reasoning cannot be used to justify al-*ḥukm al-shar`ī*, it can still be used to justify a conduct under the category *al-Istiṣḥāb*.[129] In other words, reasoning cannot independently justify good action and bad action, but it can be used when there is no specified rule in *al-Qur'ān* and *al-Sunnah* and also in the figurative sense.[130]

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[126] Abū Hāmid Muhammad al-Ghazāli, A*l-Mustasfa min llm al-Usul*, Vol 1 (Cairo: Dār al-Baṣā'ir, 2007), 83-83.

[127] *Ibid.*, 55-56.

[128] *al-Istiṣḥāb* denotes a rational proof which may be employed in the absence of other indications. See Kamali, *Principles of Islamic Jurisprudence*, 297.

[129] Al-Ghazāli, A*l-Mustasfa min Ilm al-Usul*, 217-218.

[130] Ahmad Zaki Mansur Hammad, *Abu Hamid al-Ghazali's Juristic Doctrine in al-Mustasfa min 'Ilm al-Usul with a Translation of Volume I al-Mustafa min 'Ilm al-Usul*, PhD Dissertation, (Illinois: University of Chicago, March 1987), 125.

Actually, al-Ghazālī demonstrated his loyalty to Shafi`ī's path, as he did not categorise human conduct into good and bad or right and wrong, but categorised it according to the concept of *mukallaf*. In *al-Mustaṣfā*, al-Ghazālī explained in depth the category of human conduct that can be classified into *wājib*, *mandūb*, *mubāh*, *makrūh* and *harām*.[131] In this regard, *Wājib* (obligatory) and *mandūb* (desired) can be considered as good conduct, while *makrūh* (reprehensible) and *harām* (forbidden) can be considered as bad conduct. There is neither good nor bad conduct in the category *mubāh* (permissible). All these categories are determined by *Sharī`ah*, which comes solely through the channel of revelation.[132] When there is no specified rule from *al-Qur`ān* and *al-Sunnah* to categorise a conduct, the action is considered as *mubāh*. According to al-Ghazālī, reasoning can be used to justify the conduct in the category *mubāh*.[133]

In explaining the concept of *mukallaf*, once again al-Ghazālī acknowledges the role of reasoning, as he said *al-mukallaf* refers to those who are mindful who can distinguish the commandments of God the Almighty from His prohibitions.[134] Perhaps, the scope of reasoning here did not include the justification of good or bad, but only knowing which is *wājib*, *mandūb*, *mubāh*, *makrūh* and *harām*. In *al-Mankhūl min Ta`liqāt al-Uṣūl*, however, when al-Ghazālī gave an explanation of *maṣāliḥ* (benefits), he apparently agreed that reasoning can be used to justify *maṣāliḥ* if there is no explanation from *al-Qur'ān* and *al-Sunnah*.[135] Therefore, clearly al-Ghazālī did

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[131] Al-Ghazāli, A*l-Mustasfa min Ilm al-Usul*, 65.

[132] Hammad, *Abu Hamid al-Ghazali's Juristic Doctrine in al-Mustasfa min 'Ilm al-Usul*, 6.

[133] al-Ghazāli, A*l-Mustasfa min Ilm al-Usul*, 75.

[134] *Ibid.*, 83-84.

[135] Abū Hāmid Muhammad al-Ghazāli, *al-Mankhūl min Ta`liqāt al-Uṣūl*, ed. Muhammad Ḥasan Haytu (Damascus: Dar al-Fikr, 1998), 458-459.

not totally reject the application of reasoning to *Uṣūl al-Fiqh*. Perhaps Hourani's remark explains al-Ghazālī's standpoint on reasoning:

> The denial that ethical rules can be known by independent reason is made repeatedly by al-Ghazālī. Evidently his strong feelings on this question arose from the threat of rationalism to the position of *al-Qur'ān* and *al-Sunnah* as the unique and indispensable sources of all ethical knowledge.[136]

In my opinion, al-Ghazālī did not absolutely negate the role of *`aql* or reasoning, in spite of his rigid standpoint that good and bad should be determined by revelations. Probably, his standpoint was influenced by his strong feelings against al-Mu'tazilah, so that he was apparently seen as a scholar who totally rejected the application of reasoning. Al-Ghazālī agreed to accept reasoning as an argument on three conditions; first to apply it together with *al-Istiṣḥāb*, second to justify conduct under the category *mubāh* and third to identify *maṣāliḥ* and *mafāsid* in *al-Maṣlaḥah al-Mursalah*. As long as there is no explanation from *al-Qur'ān* and *al-Sunnah* related to these three conditions, reasoning can be applied to formulate religious rule.

5.4 Conclusion

Actually, it is difficult to determine the place of ethics in Islamic knowledge because ethics arise from Western epistemology, while Islamic knowledge stands independently on its own epistemology. Ethics has usually been seen as an independent knowledge in the Western tradition, which develops within its periphery.

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[136] Hourani, 'Ghazali on the Ethics of Action', 79.

Conversely, in Islamic tradition every discipline of knowledge is complementary to the others. For most Muslim scholars, ethics is usually referred to as *Akhlāq* because both disciplines share the same subject matter and also have many points of convergence. Because *Akhlāq* develops complementarily with other disciplines of Islamic knowledge such as *Sharī`ah*, discourse of ethics in Islamic knowledge inevitably involves not only *Akhlāq*. This chapter has described how ethics has been discussed in *Sharī`ah*, especially in its sub-topic *Uṣūl al-Fiqh* or principles of Islamic jurisprudence.

Normally, ethics consists of three theories: the theory of values, theory of duties and theory of virtues. Discussion of ethics in *Sharī`ah*, especially in *Uṣūl al-Fiqh*, involves the theory of values and theory of duties. The theory of values or the Axiological approach can be seen in the application of *al-ḥākim*, *al-Maṣlaḥah al-Mursalah*, *al-`Urf* and *Sadd al-Dharā`i*. The theory of duties or the Deontological approach can be seen in the application of *al-hukm al-taklifi*, *al-hukm al-wad`i* and *Maqāṣid al-Sharī`ah*. This finding is very important because it offers a better guideline on how to practise ethics from the Islamic perspective. This chapter reveals that applying certain methods in *Uṣūl al-Fiqh* is one of the alternatives for practising ethics. Based on this finding, Islamic Environmental Ethics can be practised by applying such methods of *Uṣūl al-Fiqh*, which are quite similar to the Axiological approach and Deontological approach in the Western tradition. This will be chosen as a basis for the further analysis of the practice of Islamic Environmental Ethics in chapter six, especially with regard to the case study of *Ḥarim* and *Ḥimā*.

Muslim societies today are facing a big challenge in practising Islamic Environmental Ethics. Recently, most of the arguments explaining the status of environmental issues come from scientific knowledge and empirical findings. Can

these arguments be accepted in *Uṣūl al-Fiqh* as evidence for formulating religious rules? In *Uṣūl al-Fiqh*, such arguments can be categorised similarly to *'aql* or reasoning. From the analysis of al-Ghazālī's views, this chapter reveals that reasoning can be used together with the methods of *Uṣūl al-Fiqh*, as long as there is no clear-cut explanation in *al-Qur'ān* and *al-Sunnah*. Al-Ghazali proposed that reasoning could be used together with *al-Istiṣḥāb*, the category of *mubāh* and *al-Maṣlaḥah al-Mursalah*. Thus, in the analysis of *Ḥarīm* and *Ḥimā* in chapter six, the investigation will also pay attention to the role of ecological knowledge as part of the argument for reasoning.

Chapter 6

The Practice of *Ḥarīm* and *Ḥimā* in Islamic Tradition

6.0 Introduction

As discussed in Chapter five, *Uṣūl al-Fiqh* is a very important medium in bridging *Sharī`ah* and the contemporary issues, hence making the Islamic way of life continuously relevant. One of the most crucial issues in our time is environmental conservation, especially the issue of sustainable forestry. Demonstrably, Islam has its own approach to overcoming the issues of environmental conservation, and again *Uṣūl al-Fiqh* has an important role in bridging those issues to *Sharī`ah*. This chapter will explore the specific practice of *Sharī`ah*, which can be regarded as very close to sustainable forestry. The specific practice of *Sharī`ah* that will be explored in this chapter is *Ḥarīm* (forbidden zone) and *Ḥimā* (protected zone). The exploration intends to prove similarities between this practice and sustainable forestry.

Studying *Ḥarīm* and *Ḥimā* is important in order to analyse the role of legal ethics in facing the challenges of environmental crisis. In fact, the practice of *Ḥarīm* and *Ḥimā* reveals the application of ethical approach in *Fiqh*, either the axiological approach or the deontological approach. The analysis will provide the key to practising Islamic Environmental Ethics, using a specific case of *Ḥarīm* and *Ḥimā*. Islamic Environmental Ethics consists of *`Aqīdah*, which is related to environmental worldview, *Akhlāq*, which is related to environmental character, and *Sharī`ah*, which is related to environmental policy. Therefore, the practical element of Islamic Environmental Ethics is laid down in *Sharī`ah*, and *Uṣūl al-Fiqh* is the best means to practise it.

6.1 *Ḥarīm* and *Ḥimā* as a Case Study of Islamic Environmental Ethics

Basically, most rules in *Sharī`ah* can be seen to relate to environmental conservation because one of the purposes of *Shari`ah* (*Maqāṣid al-Sharī`ah*) is to ensure mankind meet their basic needs (*al-umūr al-ḍaruriyah*).[1] To this end, *Sharī`ah* provides particular rules to protect religion, life, intellect, lineage and property. Actually, natural environment is the most precious property of mankind because all things that are owned by them originally come from the natural environment. Therefore, al-Qaradhāwī mentioned in *Riā`yah al-Bī'ah fi Sharī`ah al-Islām* the rules related to environmental conservation discussed from the chapter on *Ṭahārah* (purification) to the chapter of *Jihad* (war) in *Sharī`ah*.[2] In other words, *Sharī`ah* arranges the relationships of humans with their environment, in addition to arranging their relationships with the Lord and also among themselves.

Ḥarīm and *Ḥimā* are among the rules in *Sharī`ah* which are closely related to environmental conservation. In *Sharī`ah*, *Ḥarīm* and *Ḥimā* are contained in most boks of Islamic fiqh under the the chapter on *Iḥyā' al-Mawāt* (dead land development). This chapter discusses the ownership of dead land passing to whoever brings it to life and explains the rules for land development for various economic activities including agriculture. According to the Prophet Muhammad (pbuh), whoever develops dead land has a right to own it. Not all types of land can be developed, however, or owned by private owners. This chapter specifies certain type of lands that are prohibited by *Sharī`ah* from being developed and certain types of land that can be owned by anybody. Preventing development and ownership of land will protect public interests as well as avoid destruction (*mafsadah*).

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[1] Yusuf al-Qaradhāwī, *Riā`yah al-Bī'ah fi Sharī`ah al-Islām* (Cairo: Dār al-Shurūq, 2001), 44–52.

[2] *Ibid.*, 39.

In *Fiqh*, Muslim jurists usually explain land regulation or land administration in terms of the right of ownership, which is classified in two categories; first, the land acquired from outside the Islamic State and, second, land inside the Islamic State.[3] The land acquired from outside can be classified into land that is seized as the spoils of war (*al-ghanīmah*), land seized without war (*al-fay'*) and land acquired by agreement.[4] Land inside the Islamic State can be classified as land that is owned by a private individual and land that is owned by the public or the state.[5] *Ḥarīm* and *Ḥimā* are usually discussed in relation to land that is owned by the public or the state, especially as a sub-topic of *al-mawāt* (dead land).

In some books written by classical Muslim jurists like *Bidāyah al-Mujtahid wa Nihāyah al-Muqtaṣid*' by Ibn Rushd and *al-Mughnī* by Ibn Qudāmah (1147-1226 CE), however, the discussion of land regulation was covered patchily in different topics. For instance, Ibn Rushd discussed land regulation in *kitāb al-jihād* (book of holy war), but only focusing on the land acquired from outside the Islamic State.[6] Ibn Qudāmah discussed land regulation in at least four places in his book; first in *kitāb ihya' al-mawāt* (dead land development),[7] second in kitāb al-wuqūf (book of endowment).[8] third in *bāb qismah al-fay'* (classification of land acquired without war) in *kitāb al-wadī`ah* (book of trust)[9] and fourth in *kitāb al-jihād.*[10] The major discussion of land

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[3] Wahbah al-Zuḥaylī, *al-Fiqh al-Islāmi wa Adilatuhu*, Vol. 6 (Damascus: Dār al-Fikr, 2007), 4595.

[4] *Ibid.*, 4595– 4606.

[5] *Ibid.*, 4607.

[6] Abū Walīd Muhammad bin Aḥmad Ibn Rushd, *Bidāyah al-Mujtahid wa Nihāyah al-Muqtaṣid*, Vol. 1 (Beirut: Maktabah al `Aṣriyah, 2004), 412-416.

[7] Abū Muhammad `Abdullah bin Aḥmad Ibn Qudāmah, *al-Mughnī wa Sharḥ al-Kabīr*, Vol. 6 (Beirut: Dār al-Fikr, 1994), 164 - 203 .

[8] *Ibid.*, 205-280.

[9] *Ibid.*, Vol. 7, 298–337.

regulation in *al-Mughnī* especially related to *Ḥarīm* and *Ḥimā* was in *kitāb ihya' al-mawāt*.

A contemporary Muslim scholar, al-Zuhaylī, in his famous book *al-Fiqh al-Islāmi wa Adilatuhu,* adopts a new approach when he discusses land regulation in very organised topics beginning with *aḥkām al-Arāḍī* (rules of land), followed by *ihya' al-mawāt* and finally *ahkām al ma`ādin wa al-ḥimā wa al-iqṭā`* (rules of mining resources land, protected land and fief land).[11] Although al-Zuhaylī also discusses land regulation elsewhere, he apparently makes an effort to introduce the Islamic perspective of land administration. In discussing these topics, al-Zuhaylī not only emphasises the right of ownership but also the status of land-use. Therefore, his discussion of land regulation can be regarded as a new approach to contemporary land administration.

Perhaps the discussion of land regulation in *Fiqh* should be reformed by giving more attention to status of land-use instead of solely emphasising the right of ownership. In principle, the right of ownership in Islamic land regulation emphasises the concept of dual ownership (human beings and God), which means Islam protects and endorses the private right to own property including land, but the ownership is bound by the understanding that everything absolutely belongs to Allah the Almighty.[12] Therefore, the right of the landlord is granted by Islamic land regulation in terms of gaining benefit from his land. However, does the regulation also allows the landlord to develop his land according to whatever purpose of his decision or the government actually have some rights to decide a suitable activity to be developed?

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[10] *Ibid.*, Vol. 9, 484–492.

[11] al-Zuhaylī, *al-Fiqh al-Islāmi wa Adilatuhu*, Vol. 6, 4595-4655.

[12] Muhammad `Abd al-Ra'ūf, *A Muslim's Reflection on Democratic Capitalism* (Washington: American Enterprise Institute of Public Policy Research, 1984), 19.

This is not to query the right of an individual or a group to own land, but the right of an individual or a group to choose the type of land-use. In other words, this question queries the status of land-use rather than the right of ownership. According to Sait and Lim, contemporary Muslim society faces challenges related to land issues such as urbanisation, land conflict, types of land-use and environmental problems, so that the orientation of land regulation has to be reformed.[13] They suggest that the Islamic land regulation needs to pay attention to *Maṣlaḥah al-Mursalah* (public interest) in order to face those challenges, instead of solely paying attention to the right of ownership as explained by the classical Muslim jurists.[14]

Nowadays, one of the most crucial issues in environmental conservation is how to reconcile traditional practice regarding private rights to land with important public interests that would repeal the privileges of private owners.[15] Actually, the issue of reconciliation of private rights and public needs has already been discussed in *Uṣūl al-Fiqh*, especially in the topic of *Maṣlaḥah al-Mursalah*. In the context of Islamic land regulation, there must be reconciliation between the right of the landlord to develop his/her land and the right of government to insist on suitable land-use in the public interest. Therefore, the contemporary discourse on land regulation in *Fiqh* has to pay great attention to the status of land-use. Studying *Ḥarīm* and *Ḥimā* in this sense is an attempt to pay more attention to the status of land-use in Islamic land regulation rather than the right of ownership.

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[13] Siraj Sait and Hilary Lim, *Land, Law and Property: Property and Human Right in the Muslim World* (London: Zed Books, 2006), 25.

[14] *Ibid.*, 28.

[15] Lynton Keith Caldwell and Kristin Sharon Shrader-Frechette, "Reconsidering Land Policy an Introduction", in *Policy for Land: Law and Ethics*, ed. Lynton Keith Caldwell and Kristin Sharon Shrader-Frechette (Lanham: Rowman & Littlefield, 1993), 8.

As a case study of Islamic Environmental Ethics, *Ḥarīm* and *Ḥimā* must be seen from the land-use perspective. In this regard, the analysis of *Ḥarīm* and *Ḥimā* needs to explore the reasons for *Sharī'ah*'s enforcement of such things as land-use in Islamic land regulation. In this context, there are at least three reasons why the enforcement has been legislated, which is clearly not for the purpose of determining the ownership, but considering the most appropriate land-use. The likely reasons are: manifestation of ecological knowledge, construction of environmental policy and fulfilment of ethical purpose.

6.1.1 Manifestation of Ecological Knowledge

Land-use usually refers to the way humankind modifies the natural environment, which was originally natural forest. Inevitably, the modification of the natural environment will have some impact on the entire ecosystem, and sometimes will destroy the equilibrium. Therefore, ecological knowledge is very much needed in order to guide humankind in how to act with regard to nature. Ecological knowledge is defined by Berkes as referring to the knowledge of relationships of living beings with one another and also with their environment.[16] In the domain of Western science, ecological knowledge narrowly refers to knowledge acquired by scientific methods that is named ecology.[17] The ecological knowledge has evolved since the earliest relationships of humankind and their nature, when it was not in the form of structured knowledge.

The evolution of ecological knowledge has been influenced by local custom and culture, and also by religion. Because modern Ecology is currently considered as the only scientific knowledge, the other ecological knowledge has always been

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[16] Berkes, *Sacred Ecology: Traditional Ecological Knowledge and Resources Management*, 6.

[17] *Ibid.*, 6.

regarded as a traditional one. Lately, however, traditional ecological knowledge has attracted many environmentalists and scientists who wish to unravel the secrets behind harmonious relationships of previous generations and their nature. In *Our Common Future*, the WCED has promoted the application of traditional ecological knowledge to modern societies as it offers so many lessons in the management of natural resources towards sustainable development.[18]

In my opinion, Islam also offers many lessons related to ecological knowledge, which are primarily based on *al-Qur'ān and al-Sunnah*. Because the sources of Islamic ecological knowledge are divine texts, the knowledge is considered as sacred. Indeed, the sacred element is very important in Environmental Ethics because it is closely related to faith, and it satisfies emotional needs and cultivates cultural patterns that enable us to maintain knowledge's integrity and stability.[19] In this regard, *Ḥarīm* and *Ḥimā* which represent some areas of Islamic ecological knowledge can also be considered as sacred practice. Therefore, practising *Ḥarīm* and *Ḥimā* inevitably provides extraordinary benefits for Muslim society in terms of conserving the environment.

Clearly, the practice of *Ḥarīm* and *Ḥimā* in Islamic land regulation pays great attention to ecological equilibrium and natural resources, and at the same time ties the concern in with the principles of belief in God the Almighty. According to al-Qarādhawī, one of the most important principles in Islamic teachings related to the environment is preserving *al-tawāzun al-bī'ī* (ecological equilibrium).[20] The existence of ecological equilibrium is stated in *al-Qur'ān*, for instance, in verse 49 *sūrah al-*

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[18] WCED, *Our Common Future*, 12.

[19] Edward Goldsmith, *The Way: An Ecological View*, (Devon: Themis Books, 1996), 99.

[20] al-Qarādhawī, *Riā`yah al-Bī'ah fi Sharī`ah al-Islām*, 152.

Qamar, verse 2 *sūrah al-Furqān*, verse 8 *sūrah al-Ra`d* and verse 9 *sūrah al-Raḥmān*.[21] Apart from this, *Ḥarīm* and *Ḥimā* also preserve natural resources from misuse by people, pollution and congestion. [22] Every Muslim has to perceive natural resources as *ni`am* (bounties) from Allah, and thus preserving them is a sign of gratitude.[23] Therefore, the practice of *Ḥarīm* and *Ḥimā* can be considered as manifestations of Islamic ecological knowledge.

Even though the main sources of Islamic ecological knowledge are *al-Qur'ān* and *al-Sunnah*, Islam also acknowledges other sources like custom and scientific knowledge. For example, the practice of *Ḥimā* was originally inherited from the custom of Arab tribes before the Prophet (pbuh) had assimilated it to be practised in Islamic land regulation.[24] In fact, Muslim jurists have explored the possibility of assimilating such sources as custom or *al-`Urf* in Islamic jurisprudence. In the context of *Ḥimā*, the discussion of the assimilation will be discussed further in sub-topic 6.3. The most important point is that Islamic ecological knowledge does not restrict itself to sources only from divine texts, but also acknowledges other sources based on rational or empirical methods.

Nowadays, ecological knowledge has been dominated by scientific knowledge, especially Biology. Thus, Ecology is usually considered as a branch of Biology which deals with the interrelationships between organisms and their environment.[25] In considering this tendency, Islam does not reject scientific knowledge as an additional source as long as it does not oppose the principles of

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[21] *Ibid.*. 152.

[22] Izzi Dien, *The Environmental Dimensions of Islam*, 35-36.

[23] al-Qarādhawī, *Riā`yah al-Bī'ah fi Sharī`ah al-Islām*, 2001, 83.

[24] al-Zuhaylī, *al-Fiqh al-Islāmi wa Adilatuhu*, Vol. 6, 4638.

[25] Bullock and Trombley, *The New Fontana Dictionary of Western Thought*, 247.

Islamic ecological knowledge that are based on *al-Qur'ān* and *al-Sunnah*. Moreover, as suggested by Ozdemir, *al-Qur'ān* itself can be studied from an ecological perspective.[26] Therefore, there is a possibility to enrich Islamic ecological knowledge by acquiring arguments from scientific knowledge, and this will modify the practice of *Ḥarīm* and *Ḥimā* to meet the contemporary situation.

6.1.2 Construction of Environmental Policy

While most religious environmentalism emphasises the employment of cosmological doctrines or sacred values in establishing Environmental Ethics, Islam promotes an extension of theoretical Environmental Ethics by proposing a practical strategy. According to Jenkins, *Uṣūl al-Fiqh* offers pragmatic recourses for practical Environmental Ethics by developing new moral precepts that are adaptable to contemporary environmental issues, and at the same time maintain the continuity of authority.[27] Therefore, Islamic Environmental Ethics may not only require Islamic cosmology or Islamic ethics to establish the theory, but also require Islamic jurisprudence for the practical part. In this regard, Islamic jurisprudence provides a systematic method to establish environmental policy.

Perhaps, the most important practical part of Environmental Ethics is environmental policy, which also includes environmental management. The construction of environmental policy since its initiation in the 1970s was dominated by non-religious principles even in Muslim countries. Latestejien and Schoonenboom identify one of the challenges in making environmental policy as finding the

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[26] Ozdemir, *The Ethical Dimension of Human Attitude Towards Nature*, 189.

[27] Jenkins, "Islamic Law and Environmental Ethics: How Jurisprudence (*Uṣūl al-Fiqh*) Mobilizes Pratical Reform", 341.

vocabulary and mechanisms to translate words into actions.[28] Actually, their concern is how to assimilate Sustainable Development as international environmental policy applies to countries that inevitably have diverse values. In the context of Muslim countries, the implementation of such an environmental policy needs a religious contribution, at least to find appropriate vocabulary and mechanisms that can fit Islamic values.

As a practical part of Environmental Ethics, environmental policy must represent the ethical principles of a community. In other words, policymakers have to assimilate policy instruments with social values. According to Connelly and Smith, environmental policy usually contains three types of policy instruments: regulations and enforcement, economic instruments and voluntary approaches.[29] Islamic teachings can not only enrich these policy instruments, but more importantly can be the basis of environmental policymaking. Practice of *Ḥarīm* and *Ḥimā* is a good example of applying Islamic teachings in constructing environmental policy or at least in enriching the existing international environmental policy.

Adding religious elements into environmental policy will give extraordinary benefits especially at the phase of implementation. According to Berman, non-religious policy neglects the importance of certain elements of policy, as below:[30]

a. ritual; that is ceremonial procedures which symbolise the objectivity of policy

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[28] Henk Van Latesteijn and Jan Schoonenboom, "Policy Scenarios for Sustainable Development", in *Environmental Policy in an International Context*, ed. Andrew Blowers and Pieter Glasbergen (London: Arnold, 1996), 254.

[29] Connelly and Smith, *Politics and the Environment: From Theory to Practice*, 149.

[30] Harold J. Berman, *The Interaction of Law and Religion* (London: SCM Press, 1974), 31.

b. tradition; that is, language and practice handed down from the past which symbolise the ongoing policy.

c. authority; that is, the reliance upon written or spoken sources of policy which are considered to be decisive in themselves and which symbolise the binding power of policy.

d. universality; that is, the claim to embody universally valid concepts or insights which symbolise the policy's connection with an all-embracing truth.

Berman reveals important arguments as to how religion can contribute to enhancing existing environmental policy. In addition, Islamic jurisprudence extends the capability of religious contribution, not only to enhance or enrich environmental policy, but also to formulate and construct new environmental policy that is parallel with Islamic teachings.

Perhaps constructing Islamic environmental policy that also includes environmental law should be considered as a new challenge for the contemporary Muslim jurist. Environmental policy or environmental law is already stated in *Sharī'ah* and *Fiqh*, but it is scattered under various topics. According to Llewellyn, although it is not yet recognised as an independent discipline, ample bases do exist for its future development.[31] He adds that Islamic environmental policy can be derived from *Uṣūl al-Fiqh* and the myriad substantive rulings of the *Sharī'ah* that pertain to the environment.[32] Therefore, the contributions of Islamic teachings to conserving the

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[31] Othman A. Llewellyn, "The Basis for a Discipline of Islamic Law", 186.

[32] *Ibid.*, 186.

environment not only provide suitable vocabulary or mechanism for the existing environmental policy, but also formulate and construct an Islamic version of environmental policy.

In the case of *Ḥarīm* and *Ḥimā*, the application of *Uṣūl al-Fiqh* and substantive law has been disclosed by Muslim jurists. They discuss *Ḥarīm* and *Ḥimā* by revealing the arguments and the reasons why *Ḥarīm* and *Ḥimā* are practised in Muslim society. Actually, *Uṣūl al-Fiqh* has a great role in legislating the rules related to *Ḥarīm* and *Ḥimā* in addition to *al-Qur'ān* and *al-Sunnah*. Among the applications of *Uṣūl al-Fiqh* related to *Ḥarīm* and *Ḥimā* are *Maṣlaḥah al-Mursalah*, *al-`Urf*, *Sadd al-Dharā`i* and *Maqāṣid al-Sharī`ah*. Although *Ḥarīm* and *Ḥimā* only represent a small proportion of scattered environmental policy or environmental law in traditional *Fiqh*, studying *Ḥarīm* and *Ḥimā* is very important in order to explore the basis of Islamic environmental policy.

6.1.3 Fulfilment of Ethical Purpose

The ultimate purpose of Environmental Ethics, whether the Axiological approach or Deontological approach is adopted, is to conserve nature by preserving its equilibrium. Almost all theories of Environmental Ethics whether anthropocentric or non-anthropocentric seek the most appropriate method of environmental conservation. Although there are various approaches and diverse ways proposed by these theories, all the theories of Environmental Ethics converge at the same point. Religious Environmental Ethics, however, especially Islamic Environmental Ethics, do not only pay attention to the ecological goal, but also humankind's submission to God the Almighty. Therefore, the main purpose of Islamic Environmental Ethics is to fulfil both environmental service and divine task.

Although all theories of Environmental Ethics are intended to conserve nature, there is still a dilemma in prioritising between feeding people and conserving nature. The dilemma produces a win-lose situation, meaning if people win, then nature loses and vice versa.[33] Perhaps Sustainable Development offers the best solution in facing the dilemma, although the win-win solution may not satisfy every single party. As proposed in *Our Common Future*, the ultimate purpose of Sustainable Development is to meet humanity's essential needs either for current generations or for future generations.[34] Humankind has no other choice except to conserve nature. Therefore, both meeting essential needs and conserving nature are widely considered as the ultimate purpose of Environmental Ethics.

Islamic Environmental Ethics pay great attention to meeting human needs as well as conserving nature. According to Izzi Dien, verse 77 *sūrah al-Qaṣaṣ* indicates the balance between these two concepts that are often raised in the environmental debate.[35] He explains that neither human beings nor non-human beings have supremacy in deciding whose right should come first.[36] In other words, there is no anthropocentricism or non-anthropocentricism in Islamic Environmental Ethics, but only God the Almighty has supremacy to decide whose right should be prioritised. Actually, Islamic Environmental Ethics can be termed as 'Submission to the Divine Preferences', in which preferences are determined according to the just will of the Creator.[37]

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[33] Holmes Rolston III, "Feeding People Versus Saving Nature", in *Environmental Ethics: An Anthology*, ed. Andrew Light and Holmes Rolston III (Malden: Blackwell Publishing, 2003), 451.

[34] WCED, *Our Common Future*, 43.

[35] Izzi Dien, *The Environmental Dimensions of Islam*, 82-83.

[36] *Ibid.*, 82-85.

[37] *Ibid.*, 85.

Clearly, the ultimate purpose of Islamic Environmental Ethics is human submission to God the Almighty. In other words, the purpose of meeting essential needs and at the same time conserving nature is bound by the supreme justice that is the just will of the Creator. Perhaps, the 'Submission to Divine Preference' is the middle way between human-centred ethics and non-human-centred ethics. Every Muslim believes that this is the only way to achieve a win-win situation. Therefore, Islamic Environmental Ethics is clearly different from the concept of Sustainable Development in this basic principle, even though there are some similarities in other areas.

Again, the practice of *Ḥarīm* and *Ḥimā* is a good example of the fulfilment of ethical purpose in Islamic Environmental Ethics. Practice of *Ḥarīm* and *Ḥimā* indicates a tendency to pay attention to the fulfilment of human needs. In the case of *Ḥarīm* and *Ḥimā*, the application of *Maṣlaḥah al-Mursalah*, *al-`Urf*, *Sadd al-Dharā`i* and *Maqāṣid al-Sharī`ah* is practised for this reason, or *umūr al-ḍaruriyyah*, the juristic term. *Ḥarīm* and *Ḥimā* as a case study reveal an adequate explanation of how Islamic Environmental Ethics purposely meet human needs. The analysis will be discussed in sub-topics 6.2 and 6.3.

On the other hand, practice of *Ḥarīm* and *Ḥimā* also indicates a tendency to pay attention to environmental conservation. In this context, the practice of *Ḥarīm* and *Ḥimā* can be considered as a manifestation of Islamic environmental principles that are *`Ibādah*, *Khilāfah*, *`Imārah*, *`Adl* and *Iḥsān*. These principles clearly relate to the conservation of nature by requiring humankind to give appropriate respect to other creatures. Therefore, choosing *Ḥarīm* and *Ḥimā* as a case study will reveal how Islamic Environmental Ethics pays appropriate respect to nature in order to fulfil ecological goals. The most important point is that the practice of *Ḥarīm* and *Ḥimā* will

indicate the fulfilment of the ultimate purpose of Islamic Environmental Ethics that is submission to God the Almighty, apart from the purposes of meeting essential needs and conserving nature.

6.2 Practice of *Ḥarīm* in *Fiqh*

Literally, *Ḥarīm* means forbidden or inviolate zone, the land that cannot be developed in order to preserve it from pollution and destruction. In classical *Fiqh* books, among the forbidden lands are wells, rivers, springs, underground water and hills. Development is prohibited or restricted in order to prevent the impairment of natural resources and utilities.[38] In this regard, the practice of *Ḥarīm* is almost similar to the current practice of protected areas like Strict Nature Reserves, National Parks, Protected Landscapes, Resources Reserves and Managed Resources Areas. According to Bakadar and colleagues there are two types of *Ḥarīm*; inviolate zones that surround a settlement such as a town or village, and inviolate zones that preserve natural resources such as rivers and lakes.[39]

In the early development of *Fiqh*, however, Muslim jurists did not discuss *Ḥarīm* specifically and when they did touch upon it the discussion was shallow compared with their discussion on *Ḥimā*. For example, al-Shāfi`ī did not discuss *Ḥarīm* specifically in his prominent book *al-Umm*, but only explained some natural resources that could not be developed because they adjoined private land.[40] On the other hand, when he discussed *Ḥimā*, he did discuss it specifically and deeply.[41]

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[38] Llewellyn, "The Basis for a Discipline of Islamic Law", 210.

[39] Abubakar Ahmad Bakadar et al., "Islamic Principles for the Conservation of the Natural Environment", in *Islam and the Environment*, ed. A. R. Agwan (Kuala Lumpur: Synergy Books International, 1997), 99.

[40] Muhammad Bin Idris al-Shafi`i, *al-Umm*, Vol. 4 (Beirut: Dār al-Kutub al-`Ilmiah, 2002), 46.

[41] *Ibid.*, 54-58.

Perhaps, during that period, *Ḥarīm* was not regarded as an independent rule, but related to the rules of land ownership.

Muslim jurists who came after al-Shafi`ī such as the Andalusian jurist Ibn Ḥazm (994-1064 CE) were still influenced by the tendency. Ibn Ḥazm wrote in his book *al-Muḥallā bi al-Āthār* that *Ḥarīm* only refers to the inviolate zone or area in securing water resources like wells and springs owned by private owners.[42] Then Ibn Ḥazm wrote that there are no other types of *Ḥarīm* except the one that he had explained.[43] Ibn Ḥazm's explanation of *Ḥarīm* emphasised the right of an individual to protect his land from any nearby development that could affect its productivity. In order to secure private land, Islamic law prohibited the nearby land to be developed by other parties.

Although Ibn Qudāmah was apparently influenced by the previous tendency, he initiated a new effort. In his book *al-Mughnī*, Ibn Qudāmah explained that *Ḥarīm* refers to an inviolate zone or area located near developed land that cannot be developed by others in securing the complete benefits delivered by the land.[44] Clearly, he emphasised the right of ownership. He explained that whenever someone dug a well on a dead land, there was an inviolate zone or *Ḥarīm* around the well that could not be developed and could not be owned by others.[45] Ibn Qudāmah did not talk only about the right of ownership, however, but explained some categories of *Ḥarīm*.

When Ibn Qudāmah discussed the inviolate zone around the well, he proposed a type of *Ḥarīm* that is *Ḥarīm al-Bi'r* (inviolate zone for a well). In fact *Ḥarīm al-Bi'r* was already known because it had been mentioned by the Prophet (pbuh) in a ḥādith

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[42] `Ali Bin Aḥmad Ibn Ḥazm, *al-Muḥallā bi al-Āthār*, Vol. 7 (Beirut: Dār al-Fikr, No Date), 81.

[43] *Ibid.*, 81

[44] Ibn Qudāmah, *al-Mughnī wa Sharḥ al-Kabīr*, 168.

[45] *Ibid.*, 200.

narrated by Ahmad, Ibn Mājah, al-Bayhaqi, al-Ḥākim and other scholars.[46] In addition to *Ḥarīm al-Bi'r*, however, Ibn Qudāmah also explained about some other types of *Ḥarīm*, for instance, *Ḥarīm al-Shajarah* (inviolate zone for tree).[47] He also mentioned that if someone digs a well and leaves it without any certainty of ownership, then the well can be used by the public.[48] Ibn Qudāmah mentioned the right of the public without further explanation as to whether the public well also has its inviolate zone.

Among the classical Muslim jurists who had discussed *Ḥarīm* was al-Nawāwī (1234-1278 CE). In his book *Rawḍah al-Ṭālibīn*, *Ḥarīm* refers to the inviolate zone or area surrounding land that is needed to ensure complete benefits produced by the land such as zone for roads and canals.[49] According to him, there are four types of *Ḥarīm*; the first refers to dead land in a non-Muslim state that has a peaceful agreement with an Islamic state, the second refers to an inviolate zone surrounding a public settlement like a town or village, the third refers to an inviolate zone surrounding a private residence and the last refers to an inviolate zone that is important in securing the preservation of natural resources like water.[50] He said that for the last category of *Ḥarīm*, the size of the inviolate zone is relative, meaning its size depends on flexible measurement.[51]

Al-Nawāwī opinion apparently tried to emphasise the role of *Maṣlaḥah* or public interest in discussing *Ḥarīm*. For example, he proposed the second category of

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[46] al-Ṣan`ānī discussed these ḥādith in his book Subul al-Salām. See Muhammad Bin Ismā'īl al-Ṣan`ānī, *Subul al-Salām Sharḥ Bulūgh al-Marām*, Vol. 3 (Beirut: Dār al-Ma`rifah, 2007), 133–134.

[47] Ibn Qudāmah, *al-Mughnī wa Sharḥ al-Kabīr*, 202.

[48] *Ibid.*, 202

[49] Muḥyi al-Dīn Yahya Bin Sharf al-Nawāwī, *Rawdah al-Ṭālibīn wa `Umdah al-Muftīn*, Vol. 4 (Beirut: Dar al-Fikr, 1995), 445.

[50] *Ibid.*, 446-447.

[51] *Ibid.*, 447.

Ḥarīm that is clearly based on public interest, and also suggested that the size of the inviolate zone for the fourth category of *Ḥarīm* should be measured based on appropriate interest. Moreover, al-Nawāwī seemed to avoid paying more attention to the right of ownership, and turned to another method of explanation using *Maṣlaḥah*. In fact, Islamic teachings pay more attention to securing public interest than securing private interest. Thus, al-Nawāwī's approach to this topic by using *Maṣlaḥah* can be considered as a beneficial extension for the development of *Fiqh*.

Contemporary Muslim jurists and scholars seem to emphasise *Maṣlaḥah* whenever they discuss *Ḥarīm*, rather than merely the ownership. A prominent contemporary Muslim jurist, al-Zuḥaylī, defines *Ḥarīm* as a necessary zone that secures the rights of a landlord to gain full benefits from his land or a zone that is needed by a landlord for securing his/her consolidated interest.[52] Apparently, al-Zuḥaylī's definition seems to continue emphasising the right of ownership. He concludes later, however, that every supporting system securing *Maṣlaḥah* to a property or a land cannot be developed.[53] Clearly, al-Zuḥaylī pays great attention to *Maṣlaḥah*, even though he apparently does not refer to public interest.

Apart from listing categories of *Ḥarīm*, al-Zuḥaylī brings out diverse opinion of four schools of thought or *madhāhib* in *Fiqh*. Interestingly, when he explains the opinion of al-Shāfi`ī's school of thought, he mentions that the size of *Ḥarīm* according to al-Shāfi`ī's school of thought is dependent on *al-`Urf*.[54] In other words, there is no fixed measurement for the size of *Ḥarīm*, as it is dependent on many factors related to land, such as location and climate. He also mentions that among the inviolate zones

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[52] al-Zuḥaylī, *al-Fiqh al-Islāmi wa Adilatuhu*, 4631.

[53] *Ibid.*, 4631.

[54] *Ibid.*, 4635.

for a public settlement are zones for public assembly and children's playgrounds.[55] In this regard, al-Zuḥaylī's approach in explaining *Ḥarīm* seems to pay attention to some contemporary issues like policy of settlement and environment.

Inevitably, the recent approach towards implementation of *Ḥarīm* is concerned with contemporary issues especially environmental or ecological problems. Instead of protecting private land from impairment and destruction, *Ḥarīm* should be applied to secure state land that brings essential needs such as water. Therefore, Izzi Dien proposes that the main objective of *Harim* is to preserve public areas from misuse by people, pollution and congestion.[56] He suggests that *Maṣlahah* should be considered as an important guideline in securing public supply of water because Umar bin `Abd al-`Aziz is reported to have decreed a public well should have *Ḥarīm* equal to the length of its bucket's rope.[57] Clearly, in Izzi Dien's opinion, *Maṣlahah* can be considered as an important argument for practising *Ḥarīm*. Because *Ḥarīm* is also related to *Maṣlahah*, the governing authorities responsible for safeguarding public interest have a right to establish inviolate zones in order to secure essential needs like water resources. According to Bakadar and colleagues, *Ḥarīm* can be categorised in two categories; inviolate zones surrounding every town and village that are to be managed by the people of the settlement and inviolate zones surrounding water sources such as seas, lakes, rivers and wells that are controlled by government.[58] In the contemporary context, the first category of *Ḥarīm* refers to greenbelt zones and

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[55] *Ibid.*, 4635.

[56] Izzi Dien, *The Environmental Dimensions of Islam*, 35-36.

[57] *Ibid.*, 36.

[58] Bakadar et al., "Islamic Principles for the Conservation of the Natural Environment", 99.

the second one refers to catchment zones or reservoirs. In order to secure public essential needs, developments within these zones are prohibited or restricted.

6.2.1 Traditional Ecological Knowledge in Practice of *Ḥarīm*

Clearly, the practice of *Ḥarīm* in Islamic tradition has portrayed the implementation of traditional ecological knowledge. Although in the past, *Ḥarīm* was practised in order to protect private or individual land from nearby development, the practice was carried out according to ecological knowledge especially related to water resources. Most of the early discussion by classical Muslim jurists concerned water resources; for instance, *Ḥarīm al-Bi'r* and *Ḥarīm al-`Ayn* (inviolate zone for spring). Then they started to look at other types of *Ḥarīm* like *Ḥarīm al-Dār* (inviolate zone for house) and *Ḥarīm al-Qaryah al-Maḥyah* (inviolate zone for public settlement). Possibly, the new concern with the other types of *Ḥarīm* indicates the development of their ecological knowledge.

The Prophet Muhammad (pbuh) only mentioned *Ḥarīm al-Bi'r* and *Ḥarīm al-Shajarah,* and no other types of *Ḥarīm*. According to al-Ṣan`ānī, the other types of *Ḥarīm* like *Ḥarīm al-Nahr* (inviolate zone for river) were proposed by classical Muslim jurists based on *Qiyās*.[59] All these types of *Ḥarīm* were needed because of similar *`illah* (the commonality of the effective cause) compared with *Ḥarīm al-Bi'r*. In this case, the *`illah* is to prevent any harm befalling the water resource or to grant the right of the landlord to water his/her cattle.[60] Therefore, ecological knowledge is obviously needed in order to identify which type of land needs *Ḥarīm*. Perhaps the

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[59] al-Ṣan`ānī, *Subul al-Salām Sharḥ Bulūgh al-Marām*, 134.

[60] *Ibid.*, 133.

more types of *Ḥarīm* proposed by classical Muslim jurists, the wider their ecological knowledge.

The implementation of traditional ecological knowledge was also indicated by the measurement of *Ḥarīm*, which was applied by classical Muslim jurists. Basically, classical Muslim jurists proposed different measurements for *Ḥarīm al-Bi'r* because they referred to different lessons from some related *aḥādith*. According to al-Ṣan`ānī, there were several narrations from the Prophet (pbuh) about the measurement of *Ḥarīm al-Bi'r*; first narrated by Ibn Mājah from `Abdullah Bin Mughaffal, and followed by al-Ṭabarānī from Ash`ath Bin al-Hasan, Aḥmād from Abū Hurairah, al-Dāruquṭnī from Sa`īd Bin al-Musayyib, al-Bayhaqī also from Sa`īd Bin al-Musayyib and lastly al-Ḥākim from Abū Hurairah.[61] The authenticity of these narrations is also diverse, and will be discussed later in sub-topic 6.2.2.

From these different narrations, classical Muslim jurists proposed different measurement for *Ḥarīm al-Bi'r*. According to al-Ḥanafī's school of thought, the inviolate zone for *Bi'r al-`Aṭan* (water can be taken out by hand) is forty cubits and the inviolate zone for *Bi'r al-Nāḍih* (water cannot be taken out by hand) is from forty to sixty cubits.[62] According to al-Mālikī's school of thought, the inviolate zone for wells is dependent on its size and the type of land.[63] According to al-Shāfi`ī's school of thought, the inviolate zone for wells is measured by considering *al-`Urf*.[64] According to al-Ḥanbalī's school of thought, the inviolate zone for *al-Bi'r al-`Ādiyah* (old wells) is fifty cubits and that for *al-Bi'r al-Badī'* (new wells) is twenty-five

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[61] *Ibid.*, 133.

[62] al-Zuḥaylī, *al-Fiqh al-Islāmi wa Adilatuhu*, 4633.

[63] *Ibid.*, 4634.

[64] *Ibid.*, 4635.

cubits.[65] Clearly, the measurements of *Ḥarīm* do not only refer to those narrations, but also consider other factors including ecological knowledge as proposed by al-Mālikī's school of thought and al-Shāfi`ī's school of thought.

Because the Prophet Muhammad (pbuh) only mentioned *Ḥarīm al-Bi'r* and *Ḥarīm al-Shajarah*, the measurement for the other types of *Ḥarīm* was probably based on other sources like traditional ecological knowledge. For instance, the inviolate zone for rivers extends to half the river's width on both banks and the inviolate zone for land irrigation, wells and springs varies from 300 to 500 cubits.[66] The implementation of ecological knowledge in identifying other types of *Ḥarīm* and also in determining its measurement has already been accepted by classical Muslim jurists in the name of *al-`Urf* as proposed by al-Shāfi`ī's school of thought. Therefore, it is also acceptable to implement scientific ecological knowledge in identifying contemporary *Ḥarīm* as well as determining its measurement. As has been suggested before, the contemporary *Ḥarīm* may refer to greenbelt zones and catchment zones, which are important in overcoming environmental problems.

6.2.2 Application of *Uṣūl al-Fiqh* in Practice of *Ḥarīm*

The main arguments for practising *Ḥarīm* in Islamic tradition were narrations from the Prophet Muhammad (pbuh), as explained by al-Ṣan`ānī in his *Subul al-Salām*.[67] Al-Ṣan`ānī, however, only listed the narrations about *Ḥarīm al-Bi'r* in his book. There is a *ḥadīth* narrated by Abū Dāwud in his *Sunān* from Abū Sa`īd al-Khudrī, to the effect that the Prophet Muhammad (pbuh) made inviolate zones for

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[65] *Ibid.*, 4636.

[66] Izzi Dien, *The Environmental Dimensions of Islam*, 35-36.

[67] al-Ṣan`ānī, *Subul al-Salām Sharḥ Bulūgh al-Marām*, 133.

palm trees.[68] Also there is a *ḥadīth* narrated by al-Ḥākim from `Ubādah Bin al-Ṣāmit, that the Prophet (pbuh) made inviolate zone for palm tree.[69] Thus, the arguments used by classical Muslim jurists to practise other types of *Ḥarīm* apart from *Ḥarīm al-Bi'r* and *Ḥarīm al-Shajarah* were probably derived from other sources in *Uṣūl al-Fiqh*. Among these sources are *Qiyās*, *al-Maṣlaḥah al-Mursalah* and *al-`Urf*.

Some of the narrations about *Ḥarīm al-Bi'r* are considered weak. According to al-Ṣan`ānī, the narration from Ibn Mājah and one of two narrations from al-Ḥākim are *ḍa`īf* or weak, while as regards the narration from al-Dāruquṭnī, its chain of narrators is *wahm* or doubtful.[70] Al-Ṣan`ānī also commented on the narration from al-Bayhaqī that was considered as a *ḥādith mursal* (hurried *ḥādith*), but the *ḥādith* came from a great successor, Sa`īd bin Musayyib.[71] The narration from al-Bayhaqī and the other narrations from al-Ṭabarānī, Aḥmad and one narration from al-Ḥākim seemed to be acceptable according to him. He said that the narrations indicate an affirmation of the practice of *Ḥarīm al-Bi'r*.[72] Based on al-Ṣan`ānī's analysis, the main arguments for practising *Ḥarīm al-Bi'r* are originally derived from *al-Sunnah*.

Similar to *Ḥarīm al-Shajarah*, the arguments for practising it are also derived from *al-Sunnah*. The Prophet Muhammad (pbuh) has been reported to make inviolate zones for a palm tree or tree. The inviolate zone for a palm tree extends away from the palm tree for a distance of its branch, which is about five to seven cubits from all

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[68] Abū Dāwud Sulaymān Bin al-Ash`ath , *Sunān Abī Dāwud*, Vol. 2 (Beirut: Dār al-Jinān, 1988), 340.

[69] Abū `Abdullah Muhammad bin `Abdullah al-Ḥākim, *al-Mustadrak `Alā al-Ṣaḥīḥayn*, Vol. 4, Beirut: Dar al-Kutub al-`Ilmiyah, 1990, 109.

[70] al-Ṣan`ānī, *Subul al-Salām Sharḥ Bulūgh al-Marām*, 133.

[71] *Ibid.*, 133.

[72] *Ibid.*, 133.

directions.[73] Actually, there are two narrations mentioning *Ḥarīm al-Shajarah*, which are from Abū Dawud in his *Sunān* and from al-Ḥākim in his *al-Mustadrak*. The narration from Abū Dawud was considered *ṣaḥīḥ* or an authentic narration.[74] Similar to the narration from al-Ḥākim, it was also considered *ṣaḥīḥ* by al-Ḥākim himself.[75] Because both narrations are *ṣaḥīḥ* or authentic, they are considered as a strong argument in favour of *Ḥarīm al-Shajarah*.

The other types of *Ḥarīm* like *Ḥarīm al-Nahr*, *Ḥarīm al-Dār* and *Ḥarīm al-Qaryah al-Maḥyah* have not directly derived from the main sources *al-Qur'ān* and *al-Sunnah*. As al-Ṣan`ānī said, these types of *Ḥarīm* were affirmed by classical Muslim jurists based on *Qiyās*.[76] The *`illah* of practising these types of *Ḥarīm* is similar to the *`illah* of *Ḥarīm al-Bi'r* or *Ḥarīm al-Shajarah*, which is to ensure individual or public right to gain full benefits from property or to prevent any harm to essentials like water. Given al-Ṣan`ānī's opinion, classical Muslim jurists proposed the other types of *Ḥarīm* by using human sources as recognised in *Uṣūl al-Fiqh*. Therefore, it is also possible to classify catchment zones or mountain forests as *Ḥarīm* because these zones have a very crucial role in maintaining public essential needs like water.

Furthermore, classical Muslim jurists did not only refer to *Qiyās*, but also the other human sources like *al-`Urf* and *al-Maṣlaḥah al-Mursalah*. According to al-Zuḥaylī, al-Shāfi`ī's school of thought proposed the application of *al-`Urf* in measuring the size of *Ḥarīm* rather than only using fixed measurement in all

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[73] al-Zuḥaylī, *al-Fiqh al-Islāmi wa Adilatuhu*, 4637.

[74] Jamāl al-Dīn al-Zayla`ī, *Nasb al-Rāyah li Aḥādīth al-Hidāyah*, Vol. 6 (Cairo: Dār al-Ḥadīth, 1995), 208.

[75] al-Ḥākim, *al-Mustadrak `Alā al-Ṣaḥīḥayn*, 109.

[76] al-Ṣan`ānī, *Subul al-Salām Sharḥ Bulūgh al-Marām*, 134.

situations.[77] Perhaps al-Mālikī's school of thought also inclined to apply *al-`Urf* and *al-Maṣlaḥah al-Mursalah* when they proposed that the measurement of *Ḥarīm al-Bi'r* and *Ḥarīm al-Shajarah* should be dependent on its size and location.[78] Applying *al-`Urf* to affirm the practice of *Ḥarīm* actually means recognising ethnoecological knowledge of a society. If Muslim jurists can acknowledge ethnoecological knowledge, is it a problem for them to recognise scientific ecological knowledge?

Besides *Qiyās* and *al-`Urf*, inevitably *al-Maṣlaḥah al-Mursalah* are important sources in affirming the other types of *Ḥarīm*. Izzi Dien has given a very good lead when he writes:

> The principle of public harm is the most important guideline that can be drawn from body of rules concerning the public supply of water. The government has a responsibility to assist those who need water by satisfying public demand.[79]

Clearly, Izzi Dien's remark refers to maxims related to *al-Maṣlaḥah al-Mursalah*. Application of *al-Maṣlaḥah al-Mursalah* inevitably needs contemporary knowledge related to Environmental Science and Ecology. In this regard, Llewellyn suggests that Muslim jurists must work together with hydrologists, biologists, environmentalists and local communities to investigate the potential for practising *Ḥarīm* and its management.[80]

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[77] al-Zuhayli, *al-Fiqh al-Islāmi wa Adilatuhu*, 4635.

[78] *Ibid.*, 4634–4635.

[79] Izzi Dien, *The Environmental Dimensions of Islam*, 36.

[80] Llewellyn, "The Basis for a Discipline of Islamic Law", 211.

6.2.3 Towards Sustainable Development by Practising *Ḥarīm*

Practising *Ḥarīm* shows that Islamic teachings pay great attention to the fulfilment of Sustainable Development goals. The main goals of Sustainable Development are to fulfil essential needs and at the same time to conserve the environment. Perhaps, the Prophet's commands to make inviolate zones for wells, trees and springs were assumed by early classical Muslim jurists to secure private right to gain full benefits from property. The zone was not considered as *al-mawāt* or dead land in order to prevent any development that might cause any harm to the nearby private land. Because of this assumption, some classical Muslim scholars like Abū Dāwud placed these aḥādīth in the topic of *al-Aqḍiyyah* or judgement.[81] Securing private right is considered as a human need, although it is not considered as one of the essential needs

Some classical Muslim jurists started to realise that the Prophet's commands were not only related to private right but also intended to secure public interest. Umar bin `Abd al-`Aziz made inviolate zones for a public well with a distance equal to the length of its bucket's rope.[82] Others proposed other types of *Ḥarīm* like *Ḥarīm al-Nahr* and *Ḥarīm al-Qaryah al-Maḥyah*. These types of *Ḥarīm* were obviously proposed by them to secure public interest. A river is usually considered as a public property, so that practising *Ḥarīm al-Nahr* means to secure public supply of water. So *Ḥarīm al-Qaryah al-Maḥyah* is practised to secure public interest by ensuring every local authority provides zones for public assembly, children's playgrounds and other public facilities.

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[81] Abū Dāwud, *Sunān Abī Dāwud*, Vol 2, 340.

[82] Izzi Dien, *The Environmental Dimensions of Islam*, 36.

Perhaps these types of *Ḥarīm* are also not considered as fulfilling humanity's essential needs because we view these zones from our contemporary perspective. For example, under the category of *Ḥarīm al-Qaryah al-Maḥyah*, there is a public zone for collecting firewood.[83] Some societies probably do not consider this zone as fulfilling essential needs, but it is an essential need for other societies even today. Nowadays, some societies still depend on firewood as their energy source, so that it is an essential need for their survival. Under the category of *Ḥarīm al-Qaryah al-Maḥyah*, there is also a public zone for horses roaming where they can run and graze.[84] Probably this zone is similar to transportation facilities in our age. Therefore, the practice of *Ḥarīm* clearly is intended to fulfil essential needs regardless of circumstances.

Besides fulfilling humanity's essential needs, the practice of *Ḥarīm* is also friendly to the environment. Although *Ḥarīm* was originally practised in order to secure full benefits from land, its purpose was clearly to avoid any harm to natural resources. In this regard, al-Ṣan`ānī wrote that one of the *`illah* of *Ḥarīm al-Bi'r* was to avoid harm befalling the well.[85] By assuming this *`illah*, some classical Muslim jurists proposed other types of *Ḥarīm* like *Ḥarīm al-Nahr* and *Ḥarīm al-Qanāh* (inviolate zone for canal). Basically these inviolate zones were practised for the purpose of conserving the environment or water resources. Therefore, by practising *Ḥarīm*, Muslim societies can achieve both Sustainable Development goals, which are fulfilling essential needs and conserving the environment.

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[83] al-Zuḥaylī, *al-Fiqh al-Islāmi wa Adilatuhu*, 4635.

[84] *Ibid.*, 4635.

[85] al-Ṣan`ānī, *Subul al-Salām Sharḥ Bulūgh al-Marām*, 133-134.

Apart from achieving these goals, the practice of *Ḥarīm* is also considered as a submission to God the Almighty by obeying His Prophet's command. Although not all types of *Ḥarīm* are originally derived from *al-Sunnah*, it is practised as a religious rule. All these types of *Ḥarīm* are either derived from *al-Sunnah* or formulated by applying other arguments in *Uṣūl al-Fiqh* like *Qiyās*, *al-Maṣlaḥah al-Mursalah* and *al`Urf*. Thus, *Ḥarīm* is included as a religious rule in *Fiqh*, and practising it is regarded as an *`Ibādah* or a submission to Allah the Almighty. Certainly, this is the ultimate purpose of Islamic Environmental Ethics, which is to bring every Muslim closer to his/her Creator. The integration of this ultimate purpose together with the Sustainable Development goals makes *Ḥarīm* a practical Islamic rule in terms of environmental solutions.

6.3 Practice of *Ḥimā* in *Fiqh*

Literally, *Ḥimā* is defined as a protected or reserved zone, referring to the land that is protected by ruler or government for certain purposes like grazing and breeding or maybe to keep the zone free from any development.[86] It is the ruler or government who has authority to declare or to decree any zone being free from any development except for the habitat of animals and plants. According to Llewellyn, the term *Ḥimā* was in use by the time of the Prophet Muhammad (pbuh), as he mentioned in a *ḥadīth* that 'every ruler has a *Ḥimā*'.[87] *Ḥimā* has therefore been practised by Muslim societies since the period of the Prophet Muhammad (pbuh), continuing to the period of the Ottoman Empire. Nowadays a few Muslim countries still practise *Ḥimā* in the name

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[86] Izzi Dien, *The Environmental Dimensions of Islam*, 196.

[87] Llewellyn, "The Basis for a Discipline of Islamic Law", 212.

of *Sharī`ah*, while other Muslim countries may also practise it in the name of value-free environmental policies.

Similar to *Ḥarīm*, *Ḥimā* is usually discussed by Muslim jurists in the topic of *Ihyā al-Mawāt*. In the early development of *Fiqh*, however, *Ḥimā* was discussed more deeply than *Ḥarīm*. For instance in *al-Umm*, al-Shāfi`ī had discussed the topic of *Ḥimā* specifically as an extension sub-topic to *Ihyā al-Mawāt*, but for the topic of *Ḥarīm* he hardly mentioned it.[88] In *al-Mughnī*, Ibn Qudāmah discussed the topic of *Ḥarīm* specifically, but when he came to the topic of *Ḥimā* he discusses it more thoroughly.[89] Probably one of the reasons *Ḥimā* was better known than *Ḥarīm* was because it had already been practised by Arab societies in the pre-Islamic period before the Prophet Muhammad (pbuh).

According to al-Shāfi`ī, in the pre-Islamic period when an influential person came to a fertile area, it was customary for him to shout or make his dog bark from the top of a hill, declaring that all the area as far as the sound could be heard would be reserved for him.[90] This custom obviously discriminated against those who were less powerful, and therefore the Prophet (pbuh) did not allow the custom to be practised in Islam.[91] Narrated by al-Bukhārī from al-Ṣa`b, the Prophet (pbuh) said: 'There is no *Ḥimā* except for Allah and His Prophet'.[92] This *ḥadīth* indicates that the pre-Islamic *Ḥimā* is not permitted. Instead of this practice, it is permissible for a ruler to declare a

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[88] al-Shāfi`ī, *al-Umm*, 54-58.

[89] Ibn Qudāmah, *al-Mughnī wa Sharḥ al-Kabīr*, 185–187.

[90] al-Shāfi`ī, *al-Umm*, 54.

[91] *Ibid.*, 54.

[92] Abū `Abdullah Muhammad bin Ismāi`l al-Bukhārī, *Saḥīḥ al-Bukhārī*, (Riyadh: Bayt al-Afkār al-Dawliyah, 1998), 444-445.

fertile area as a protected zone in the name of Allah the Almighty and His Prophet Muhammad (pbuh), which means for the public good.

According to al-Shāfi`ī's statement, apparently *Ḥimā* was practised in the pre-Islamic period with regard to the right of ownership, but then the practice was banned by the Prophet Muhammad (pbuh). Al-Shāfi`ī, however, had already perceived the practice of *Ḥimā* beyond the right of ownership, when he defined *Ḥimā* as any land or area giving benefits to the public because it contained natural resources such as water, mineral, grass and forest.[93] Clearly, he perceived the Prophet's words that 'There is no *Ḥimā* except for Allah and His Prophet' as emphasising the purpose of securing *Maṣlaḥah* or public interest. Perhaps *Ḥimā* was already practised in his time for the sake of public interest rather than just to determine ownership.

In this regard, al-Shāfi`ī added further that such land could not be categorised as *al-Mawāt* because the benefits already existed there, so that the land could not be owned by anyone.[94] According to al-Shāfi`ī, the concept of benefits refers to any beneficial natural resources such as petroleum, tar and bitumen.[95] Therefore *Ḥimā* in al-Shāfi`ī's opinion not only refers to forest land or grazing land but also any land or area that contains benefits for the public. Apart from Allah and His Prophet, a Muslim ruler can also decree any public land or area to be *Ḥimā* or a protected zone, if doing so will secure the public interest.[96] Obviously, al-Shāfi`ī's explanation about *Ḥimā* had already reached beyond the context of ownership, and this influenced Muslim jurists who came after him.

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[93] al-Shāfi`ī, *al-Umm*, 48.

[94] *Ibid.*, 48 and 54.

[95] *Ibid.*, 49.

[96] *Ibid.*, 55.

Ibn Ḥazm apparently did not share this view when he restricted the explanation of *Ḥimā* to the right of ownership. Ibn Ḥazm's explanation on *Ḥimā* was done in order to strengthen his opinion that only Allah and His Prophet have a right to prevent any land being developed.[97] Actually, he disagreed with Abu Ḥanīfah's school of thought that anyone who develops dead land could not own the land except by permission of the Muslim ruler. On the contrary, he argued that everyone can develop dead land, and no one including a Muslim ruler can prevent him/her owning the land.[98] Most of his discussion on *Ḥimā* was based on the direct meaning of the hadith, 'There is no *Ḥimā* except for Allah and His Prophet', which he assumed as an affirmation of individual right to develop and own *al-Mawāt* or dead land.

Like Ibn Ḥazm, Ibn Qudāmah also discussed *Ḥimā* within the context of *Iḥyā' al-Mawāt*. In his book *al-Mughnī*, he defined *Ḥimā* as a practice in the pre-Islamic period referring to a protected zone under the category of dead land that was used by an individual only for personal benefits.[99] His definition considers *Ḥimā* as a category under *al-Mawāt* or dead land, which is obviously contra to al-Shāfi`ī's opinion that such land cannot not be classified as *al-Mawāt* because the benefits already exist. Ibn Qudāmah's discussion, however, emphasised the right of Muslim governments to protect or to restrict any land in order to secure public interest. According to him, the statement 'except for Allah and His Prophet' in the Ḥadīth means for the benefit of Muslim society, and therefore every Muslim ruler has a right to do so.[100]

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[97] Ibn Ḥazm, *al-Muḥallā bi al-Āthār*, 76-77.

[98] *Ibid.*, 76 and 77.

[99] Ibn Qudāmah, *al-Mughnī wa Sharḥ al-Kabīr*, 185.

[100] *Ibid.*, 185-186.

According to al-Nawāwī in *Rawḍah al-Ṭālibīn*, *Ḥimā* refers to a piece of land under category of *al-Mawāt* or dead land that is restricted to use by a specific group.[101] Such a practice is prohibited in Islamic tradition, so that the land cannot be restricted only for the benefit of an individual or a certain group or even for a Muslim ruler himself.[102] A Muslim ruler can, however, restrict particular land for public interests, for instance, to accommodate war horses or to provide grazing land for poor people.[103] Apparently, al-Nawāwī limited his discussion on the right of Muslim government to restrict particular land to be used for certain purposes. Although he also emphasized the role of *Maṣlaḥah* in discussing this topic, his explanation repeated what had already been explained by the previous Muslim jurists like Ibn Qudāmah.

Except for al-Shāfi`ī, the above classical Muslim jurists limited their discussion on the concept of *Ḥimā* to the protected zone under the category of *al-Mawāt* or dead land, which was restricted by a Muslim ruler for public benefits. Al-Shāfi`ī explained the concept of *Ḥimā* beyond this scope, and at the same time distinguished *Ḥimā* from *al-Mawāt* or dead land. *Ḥimā* refers to protected land that already has some benefits like grass for grazing and river for watering, so the land cannot be developed and cannot be owned by a private party. A Muslim ruler also cannot give the land to an individual or a particular group, but has to protect the land from any development for the sake of public interest. Perhaps al-Shāfi`ī's concept of *Ḥimā* is more comprehensive and also more acceptable in contemporary Muslim societies.

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[101] al-Nawāwī, *Rawdah al-Ṭālibīn wa `Umdah al-Muftīn*, 453.

[102] *Ibid.*, 453.

[103] *Ibid.*, 454.

Al-Zuḥaylī, however, a prominent contemporary Muslim jurist seems to limit the concept of *Ḥimā* to the protected zone under the category of *al-Mawāt* or dead land, not as proposed by al-Shāfi`ī. According to al-Zuḥaylī, *Ḥimā* is a protected zone under the category of *al-Mawāt* classified by a Muslim ruler as in the public interest, which is not to be developed.[104] His opinion is similar to that of Ibn Qudāmah and al-Nawāwī in that only a Muslim ruler can protect or restrict *al-Mawāt* or dead land from being developed in order to fulfil public interest. In the early explanation of this topic, al-Zuḥaylī explained:

> In the pre-Islamic period, when a tribal leader came to a fertile land, he made his dog bark from a high place, all the land as far as the sound could be heard would be restricted for his exclusive use (*Ḥimā*).[105]

Apparently, al-Zuḥaylī agrees with al-Shāfi`ī that *Ḥimā* does not refer to dead land but refers to fertile land.

The practice of *Ḥimā* seems not to be related directly to environmental conservation if it is considered as *al-Mawāt* or dead land. Perhaps, forest land and catchment zones cannot be categorised as *al-Mawāt* because the areas are not only fertile but also contain many natural resources like water and logging wood. Consequently, these areas are definitely excluded from the concept of *Ḥimā*, if *Ḥimā* refers to one category of *al-Mawāt*. Llewellyn proposes a more general definition:

> *Ḥimā* refers to all unowned lands that are reserved for the purposes pertaining to the

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[104] al-Zuḥaylī, *al-Fiqh al-Islāmi wa Adilatuhu*, 4638.

[105] *Ibid.*, 4638.

public good.[106] He suggests further that *Ḥimā* was practised in the Prophet Muhammad's (pbuh) time as an instrument of conservation.[107] Llewellyn's analysis clearly inclines to al-Shafi`i's concept of *Ḥimā*.

In this regard, Izzi Dien seems to agree with this tendency, as he suggests that *Ḥimā* is another method of preservation in Islamic law which represents a clear form of environmental conservation.[108] He notes that the concept of *Ḥimā* can be seen as the obverse of *Ihyā'*, but they can be considered as complementary institutions to one another.[109] He quotes from the *Encyclopaedia of Islam* that dead lands can be made into reserves and charges levied upon them, in order to protect them from revivification, private ownership and keep them accessible to all.[110] Therefore, *Ḥimā* may refer to either a fertile land or a dead land that is protected by government for public interest including environmental conservation. Perhaps this is the way to compromise.

In the context of environmental issues, the most important point related to *Ḥimā* is that it can be an instrument of conservation in Islamic law. According to Joma, there are six types of *Ḥimā* that are still practised around Mecca and Medina in Saudi Arabia today; reserves in which grazing is prohibited, reserves for forest in which woodcutting is prohibited, reserves in which grazing is restricted to certain seasons, reserves restricted to certain species and numbers of livestock, reserves for bee-keeping in which grazing is prohibited during flowering and, lastly, reserves for

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[106] Llewellyn, "The Basis for a Discipline of Islamic Law", 212.

[107] *Ibid.*, 212

[108] Izzi Dien, *The Environmental Dimensions of Islam*, 42.

[109] *Ibid.*, 42.

[110] *Ibid.*, 42 See also Bosworth, C. E., Donzel, E. Van, Heinrichs, W. P. and Pellat C. H. ed., *Encyclopaedia of Islam*, New Edition, Vol. 6 (Leiden: E. J. Brill, 1991), 870.

the welfare of particular villages.[111] Positively, these types of *Ḥimā* show that the purpose of practising *Ḥimā* since the time of the Prophet (pbuh) is to conserve environment and natural resources.

6.3.1 Traditional Ecological Knowledge in Practice of *Ḥimā*

In fact, the practice of *Ḥimā* in Islamic tradition can be traced to the custom of Arab tribes in the pre-Islamic period. According to Llewellyn, it is difficult to ascertain what were the purposes of the pre-Islamic *Ḥimā*, the ways in which it was managed and to what extent *Ḥimā* was used for conservation.[112] Therefore, it is difficult too to find the implementation of traditional ecological knowledge in the pre-Islamic *Ḥimā*. In the light of al-Shāfi`ī's explanation about the practice of the pre-Islamic *Ḥimā* as mentioned before, it is believed that the practice concerned the right of powerful people to own such areas rather than to implement traditional ecological knowledge for conservation purposes. Because of this concern, the Prophet (pbuh) prohibited the pre-Islamic *Ḥimā* from being practised in Islam.

The Prophet Muhammad (pbuh) amended not only the way of practising *Ḥimā*, but also the purpose of practising it. Based on the *ḥadīth* narrated by al-Bukhārī from al-Ṣa`b bin Jaththāmah that has been mentioned before, instead of Allah, His Prophet and Muslim rulers, no one has a right to claim any unowned land to be reserved for him/her. According to Ibn Qudāmah, the term 'for Allah and His Prophet' in this *ḥadīth* indicated public interests or Muslim society, so that the purpose of practising *Ḥimā* was no longer for individual or private benefits as had

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[111] Joma, *The Earth as a Mosque*, 86-87.

[112] Llyewellyn, "The Basis for a Discipline of Islamic Law", 212.

been practised in the pre-Islamic period.[113] Although the *Ḥimā*'s name was retained in the Islamic period, the way *Ḥimā* had been practised and its purpose were different.

In discussing this *ḥadīth*, al-Shawkānī related it to another *ḥadīth* narrated by Abū Dawūd, also from al-Ṣa`b, which mentioned that the place that had been protected by the Prophet (pbuh) was al-Naqī`.[114] The place that had been protected by the Prophet (pbuh) was located around eight miles from Medina.[115] According to Ibn Qudāmah, al-Naqī` was a fertile area because it was saturated by natural water resources, which then had been protected by the Prophet (pbuh) to accommodate certain animals such as war horses.[116] Based on al-Naqī`s model, the practice of *Ḥimā* can be regarded as similar to an animal sanctuary in our time. This place must be free from any development in order to protect its ecosystem for the habitat of animals. Clearly, such practice in the past portrayed the implementation of traditional ecological knowledge.

Traditional Arab communities had practised Hima as grazing reserve for restricted use as part of grazing management strategy, and also as agricultural reserve to avoid over-exploitation of agriculture by nomadic herders.[117] Joma widens this concept of *Ḥimā* by listing six types of *Ḥimā* that still exist around Mecca and Medina, which have also been discussed before.[118] According to al-Shāfi`ī, as discussed in sub-topic 6.2, *Ḥimā* not only refers to the habitat of animals but also

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[113] Ibn Qudāmah, *al-Mughnī wa Sharḥ al-Kabīr*, 175.

[114] Muhammad bin `Alī al-Shawkānī, *Nayl al-Awṭar*, Vol. 5 (Cairo: Dār al-Ḥadīth, 1998), 368.

[115] *Ibid.*, 369.

[116] Ibn Qudāmah, *al-Mughnī wa Sharḥ al-Kabīr*, 175.

[117] Hala Kilani, Assaad Serhal and Othman Llewellyn, *Al-Hima a Way of Life* (Amman: IUCN West Asia, 2007), 9.

[118] Joma, *The Earth as a Mosque*, 86-87.

protected natural resources areas. In *al-Umm*, al-Shāfi`ī categorised all types of unowned land that contained natural resources (*al-ma`ādin*) including trees and minerals as *Ḥimā*.[119] This probably emphasises the importance of justice and public right, but it also can be interpreted as an implementation of ecological concern.

In order to fulfil public interests, the natural resources area must be free from any development that can disrupt the resources. According to Kilani, Assaad and Llewellyn, for more than 1400 years, the practice of *Ḥimā* has not only helped conserve natural resources and biodiversity in the Arabian Peninsular, but also has secured sustainable use of renewable natural resources.[120] Clearly *Ḥimā* has been practised in Islamic tradition as implementation of ecological awareness apart from fulfilment of public interests. Nowadays, the practice of *Ḥimā* should be enriched by scientific ecology by retaining the spirit of *Sharī`ah*, so that it can be practised successfully in Muslim countries.

6.3.2 Application of *Uṣūl al-Fiqh* in Practice of *Ḥimā*

Similarly to *Ḥarīm*, the main arguments affirming the practice of *Ḥimā* in Islamic tradition were some *aḥādīth* or narrations. Because of the affirmation, *Ḥimā* is considered as part of *Sharī'ah* rules or laws. The most frequent *ḥadīth* used by Muslim jurists to affirm *Ḥimā*'s rule is the authentic *ḥadīth* narrated by al-Bukhari from al-Ṣa`b bin Jaththamah: 'There is no *Ḥimā* except for Allah and His Prophet'.[121] According to al-Shawkani, this *ḥadīth* was also narrated by other *ḥadīth* scholars like

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[119] al-Shāfi`ī, *al-Umm*, 48.

[120] Kilani, Assaad and Llewellyn, *Al-Hima a Way of Life*, 7.

[121] al-Bukhārī, *Saḥīḥ al-Bukhārī*, 444-445.

Aḥmad, Abū Dāwud and al-Ḥākim.[122] The narrations also explained that the Prophet (pbuh) not only made this statement but also declared a protected area that was named al-Naqī`.[123] There is also an *athār* narrated by al-Bukhārī from Aslam about how the second caliph Umar instructed Hunayy on how to manage *Ḥimā*.[124] Therefore from these narrations there is no doubt that *Ḥimā*'s rule is derived from a divine source, which is *al-Sunnah*.

According to al-Shāfi`ī, the *ḥadīth* narrated from al-Ṣa`b has two meanings; first, there is no area that can be protected for the public except what has been protected by the Prophet and second there is no area that can be protected for the public except the similar of what has been practised by the Prophet.[125] In this regard, he chose the second meaning giving similar rights to a Muslim ruler to protect a selected area for public interests.[126] According to Ibn Qudāmah, the later caliphs followed the Prophet's practice without any objection from others[127] Thus, *Ḥimā*'s rule was also affirmed by another credible source, that is, *ijmā*.[128] In fact, this source strengthens *al-Sunnah*'s arguments, so that the practice of *Ḥimā* is affirmed by both credible sources of *al-Sunnah* and *ijmā*.

Actually, the second meaning that was chosen by al-Shāfi`ī indicates the application of *Qiyās*. He mentioned in his *al-Umm* when he commented the al-Ṣa`b's *ḥadīth*:

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[122] al-Shawkānī, *Nayl al-Awṭar*, 368.

[123] *Ibid.*, 368.

[124] al-Bukhārī, *Saḥīḥ al-Bukhārī*, 585.

[125] al-Shāfi`ī, *al-Umm*, 55.

[126] *Ibid.*55.

[127] Ibn Qudāmah, *al-Mughnī wa Sharḥ al-Kabīr*, 186.

[128] *Ibid.*, 186.

> The hadith; "there is no *Ḥimā* except for Allah and His Prophet" contains a meaning that there is no *Ḥimā* except the similar practice of what has been done by the Prophet.[129]

On this understanding, he included all unowned lands that contain natural resources on the surface of the Earth as *Ḥimā* or protected areas.[130] Clearly, al-Shāfi`ī did not limit the concept of *Ḥimā* to grazing reserves like *al-Naqī*, but included any natural resource area that should be protected for public benefits. Perhaps al-Shafi`i's view of the *ḥadīth* is the best in the light of recent environmental issues.

According to Ibn Qudamah *Ḥimā* should be practised in line with *Maṣlaḥaḥ* or public interest.[131] He based his opinion on an *athār* narrated by Abū`Ubayd from Zubayr that revealed the purpose of practising Hima:

> `Umar was approached by an Arab. He asked `Umar; "O prince of believers, we fought for our land in the pre-Islamic period and we became Muslim when Islam arrived, so why do you protect it"? `Umar looked down, puffing air and twisting his moustache. It is his habit to puff and to twist his moustache when facing a grave matter. Then the man repeated his question. `Umar then responded; "All properties belong to Allah, all humans are servants of Allah,

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[129] al-Shāfi`ī, *al-Umm*., 55.

[130] *Ibid.*, 48.

[131] Ibn Qudāmah, *al-Mughnī wa Sharḥ al-Kabīr*, 187.

by Allah! If it was not for the sake of Allah, I would not protect it even one span of it.[132]

According to Izzi Dien, `Umar's decision indicates that the principle of *Ḥimā* lies not in individual benefits, but in public needs, *Maṣlaḥaḥ*.[133] In other words, a Muslim ruler has a right to protect any unowned area under *Ḥimā*'s rule that he believes to secure public benefits. Therefore, applying *al-Maṣlaḥah al-Mursalah* is an effective approach in order to adapt the practice of *Ḥim*' to recent circumstances.

6.3.3 Towards Sustainable Development by Practising *Ḥimā*

Ḥimā was practised by Muslim rulers in the past in obedience to the Prophet's (pbuh) commandment through ahadith or narrations that have been discussed before. The narrations clearly stated that *Ḥimā* is practised for the sake of Allah s.w.t and His Prophet Muhammad (pbuh). Whenever a Muslim ruler declares an area to be protected under *Ḥimā*'s rule, it means he does the action in the name of Allah and His Prophet (pbuh). Thus, his action is done in order to fulfil his duties not only as a ruler, but also as a servant of Allah the Almighty The action is considered as an *`ibādah*, which is similar to other ritual services. In this sense, the practice of *Ḥimā* clearly achieves the ultimate purpose of Islamic Environmental Ethics, which is submission to God the Almighty.

Besides this ultimate purpose, the practice of *Ḥimā* is also capable of achieving the purposes of Sustainable Development. According to Llewellyn, *Ḥimā* may be established for the purpose of achieving the common good and also for the

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[132] *Ibid.*, 186.

[133] Izzi Dien, *The Environmental Dimension of Islam*, 43.

purpose of achieving sustainable production.[134] He wrote further that historically *Ḥimā* has combined both aims, so that the institution was ecologically sustainable and socially acceptable. Llewellyn's comment is supported by previous studies that plant biomass has increased drastically in well-protected *Ḥimā* compared to adjacent open rangelands.[135] Therefore, *Ḥimā* is a traditional system that can be refreshed to meet new challenges of Sustainable Development.

The practice of *Ḥimā* pays great attention to fulfilling human needs by emphasising welfare and justice. *Ḥimā* can be considered as a welfare institution because it is practised to achieve common needs. Basically, the purpose of practising *Ḥimā* is to ensure everyone has the right to share essential natural resources. In this regard, Ibn Qudamah related *Ḥimā* to a *ḥadīth* narrated by al-Khilāl that humankind share three natural resources, which are water, fire and grass.[136] Also, according to al-Zuḥaylī, among the functions of *Ḥimā* are the provision of pasture for war horses, to accommodate charity cattle and to assist poor people feeding their cattle. *Ḥimā* is obviously rather like a welfare institution that supplies essential needs.

Apart from this, *Ḥimā* provides a dynamic system to manage natural resources towards sustainability. Originally, *Ḥimā* was practised by the Prophet (pbuh) as protected or reserve lands for war horses. According to al-Sa`b's *ḥadīth*, the Prophet protected al-Naqī`, that was a fertile area, for habitat of animals, especially horses and camels. By applying Qiyāṣ, however, al-Shāfi`ī proposed that the purpose of the Prophet's practice was also to protect natural resources. He widened the concept of

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[134] Llewellyn, "The Basis for a Discipline of Islamic Law", 214.

[135] Y. Ghanem and J. Eighmy, "Hema and Traditional Use Management among Arid Zone Villagers of Saudi Arabia", *Journal of Arid Environment*, Vol. 7 (1984), 287-297.

[136] Ibn Qudāmah, *al-Mughnī wa Sharḥ al-Kabīr*, 185.

Ḥimā to any unowned area containing natural resources on the surface on the Earth.[137] According to Kilani, Assaad and Llewellyn, *Ḥimā* has helped conserve natural resources and has secured sustainable use of renewable natural resources.[138] Clearly, the practice of *Ḥimā* has potential to achieve both aims of Sustainable Development, to meet essential needs and to conserve nature.

6.4 Conclusion

In conclusion, the analysis in this chapter indicates that Islam offers a wealth of regulations related to environmental conservation, which have been practised since the period of Prophet Muhammad (pbuh). Among those regulations are *Ḥarīm* and *Ḥimā*. Certainly, as the last divine regulations revealed by Lord the Almighty to humankind, *Sharī`ah* can deal with modern issues such as environmental crisis. The practice of *Ḥarīm* and *Ḥimā* is not only concerned with environmental conservation but is also related to religious obligations and duties, which will be judged by Allah the Almighty in the hereafter. On the other hand, the practice of *Ḥarīm* and *Ḥimā* consolidates aspects of ecological knowledge, application of divine rules and appreciation of ethical purposes. Therefore, *Ḥarīm* and *Ḥimā* ratify the potency of applying Islamic practices to face contemporary issues and provide a clear approach to turning the theory of Islamic Environmental Ethics into practice.

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[137] al-Shāfi`ī, *al-Umm*, 48.

[138] Kilani, Assaad and Llewellyn, *Al-Hima a Way of Life*, 7.

Chapter 7

Model of Islamic Environmental Ethics

7.0 Introduction

As previously discussed, Islamic Environmental Ethics proposes a comprehensive approach to environmental conservation. The approach integrates the aspects of environmental worldview, environmental policy and environmental character. This chapter will explain each aspect further by identifying related topics in Islamic teachings. Because Islamic teachings are usually categorised as *`Aqīdah*, *Sharī`ah* and *Akhlāq*, the identification analysis will be done on this basis. The identification analysis is intended to prove the role of *`Aqīdah* in representing Islamic environmental worldview, the role of *Sharī`ah* in representing Islamic environmental policy and management, and also the role of *Akhlāq* in representing Islamic environmental character.

This chapter will also explore the integrated approach of Islamic Environmental Ethics by recognising the theoretical part and the practical part. Basically, the theoretical part consists of the Islamic environmental worldview and related issues, whereas the practical part consists of Islamic environmental policy and related issues. Identification analyses based on either the category of Islamic teachings or the theoretical and practical dimensions are important in order to show the integrated approach of Islamic Environmental Ethics. The chapter will conclude with a contemporary model of Islamic Environmental Ethics to be implemented especially by Muslim societies.

7.1 Islam and Environmental Conservation

Muslim scholars always claim that the concept of religion (called *al-dīn* in *al-Qur'ān*) contains all the various aspects of life. According to the concept of *al-dīn*, Islam not only explains the relationship of humankind with God but also the relationship of people with other creations in the universe. The concept also teaches every Muslim that Islam establishes harmonic and holistic interaction between people and nature based on *al-Qur'ān* and *al-Sunnah*. Generally, the Islamic way of life consists of these three main aspects:[1]

a. *`Aqīdah*

`Aqīdah discusses belief in Allah as the one God with the highest attributes, Creator of the universe including the earth and humankind. Belief in Allah (*Tawḥīd*) is the most fundamental teaching in Islam. Other aspects of belief such as belief in holy books and messengers are built on the doctrine of *Tawḥīd*. Therefore, the explanation of worldview and cosmology in Islamic teachings is found in *`Aqīdah* principles.[2] In other words, *`Aqīdah* plays a great role in establishing Muslims' worldview in relation to their universe, which is considered as part of *Tawḥīd*.

b. *Sharī`ah*

Sharī`ah is the section of Islamic rules and regulations related to individual conduct, household life, social interaction and governance practice. The Islamic rules and regulations cover all aspects of life such as worship, marriage and properties,

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[1] Mukhtar Yahya and Fatchurrahman, *Dasar-dasar Pembinaan Hukum Islami* (Bandung: Penerbit al-Maa'rif, 1986), 35.

[2] Seyyed Hossien Nasr, *An Introduction to Islamic Cosmological Doctrines*, trans. by Baharuddin Ahmad (Kuala Lumpur: Dewan Bahasa dan Pustaka, 1992), XXV.

punishment of criminals, court procedures or judicial matters and constitutions of the state. Therefore, the role of *Sharī`ah* in Islamic teachings is very important in guiding human conduct and managing human life in terms of prosperity and peace.

c. *Akhlāq*

Akhlāq is the aspect of Islamic teachings related to human conduct. Basically, *Akhlāq* discusses how people should communicate or interact among themselves and also with other creatures in the universe. In addition to this, *Akhlāq* also teaches humankind about theory of values and duties, the concept of noble characters and the retaliation of conducts. As has been mentioned before, *Akhlāq* is the nearest synonym to ethics. The main sources of *Akhlāq* are *al-Qur'ān* and *al-Sunnah*, however, instead of human thought, as in the Western tradition.

Based on these three aspects, I propose, the Islamic approach towards environmental conservation is comprehensive and integrated (*kāmil* and *mutakāmil*), as will be explained further in this chapter. Generally, the Islamic approach consolidates these three aspects together because each of these aspects has its own role in human life. The role of *`Aqīdah* is to instil humans with a harmonious worldview related to the environment, whereas the role of *Sharī`ah* is to guard and to monitor human activities, not to disturb the natural equilibrium of the ecosystem. Finally, the role of *Akhlāq* is to establish a value system for humankind, so that their conduct can be assessed as good or bad for the environment. By consolidating these three aspects, the Islamic approach is indirectly paying equal attention to internal and external matters of human life.

7.1.1 The Role of *`Aqīdah* in Environmental Conservation

The fundamental principle in *`Aqīdah* is *Tawḥīd*, the doctrine of the oneness of Allah, within which all aspects of the Muslim's life is considered including their attitude towards environment. The doctrine emphasises that there is no one like Allah, either in terms of His existence or His actions.[3] There is also no one who is worthy of His praiseworthy names or has His glorious attributes. Fundamentally, all Islamic teachings are built on the doctrine of *Tawḥīd*. According to the doctrine of *Tawḥīd*, the Lord not only created the universe but also arranges its laws and monitors its motions. Therefore, all creatures in the universe totally belong to Allah.[4] Everyone must submit to Allah, and not be dominant by acting as He does, because the universe will be destroyed.[5] In other words, everyone has to behave as a humble creature like other creatures on Earth.

The doctrine of *Tawḥīd* also contains the belief in Allah's praiseworthy names and His glorious attributes or *al-Asmā'wa al-Ṣifāt*. In relating to *al-Asmā' wa al-Ṣifāt*, the doctrine of *Tawḥīd* persuades every Muslim that the whole universe is under Allah's supervision, so that everyone is prohibited from harming him/herself and other creatures in the universe. According to Islamic teachings, the universe is not created for nothing by Allah the Almighty but to fulfil these purposes:

a. The creation of the universe is evidence of the existence of Allah the Almighty.[6] While the holy *Qur'ān* provides the arguments for the existence of Allah through

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[3] *al-Qur'ān*, 42 : 11.

[4] *Ibid.*, 22 : 64.

[5] *Ibid.*, 21 : 22.

[6] *Ibid.*, 10 : 31.

readable evidence (*kitāb al-masṭūr*), the universe proves His existence through the visible evidence (*kitāb al-manẓūr*).[7] Therefore, humans should respect the universe including their environment.

b. The universe holds the various kinds of knowledge revealed by the Creator (*al-Khāliq*).[8] In this sense, the universe can be regarded as an 'open laboratory', where humankind gains knowledge through research and observation. In this context, Bakar observes:

> Nature is a source of many types of knowledge: mathematical, physical and metaphysical, scientific and spiritual, qualitative and quantitative, practical and aesthetical.[9]

Because of this reason, humans should appreciate the nature and deal with its according to the acquired knowledge.

c. The creation of the universe is a reward to humankind, which means they have great benefit from the universe.[10] They must always remember, however, that the universe belongs to Allah, so they have no right to destroy the universe and disrupt its balance. Humans also must conserve the environment because it is like a sumptuous gift from Allah the Almighty.

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[7] al-Qaradhāwī, *Ri`āyah al-Bī'ah fī Sharī'ah al-Islām*, 31.

[8] a*l-Qur'ān*, 3 : 191-192.

[9] Osman Bakar, *Tawhid and Science* (Kuala Lumpur: Secretariat for Islamic Philosophy and Science, 1991), 63.

[10] *al-Qur'ān*, 2 : 29.

d. The universe is created by Allah for the purpose of providing facilities for humankind to worship Him and to serve other creatures. For instance, Allah gives water to be used by humankind for ablution prior to performing worship.[11] In addition to this purpose, the entire universe itself performs worship and makes remembrance of Allah.[12] Therefore, humans should not vandalise the nature because it is created as their facilities on Earth.

e. The creation of the universe is a medium through which God the Almighty may test humans to see who of them is better.[13] According to al-Mawdūdī, the purpose of creation was to create humans and then put them to the test, to see who do good deeds and who do not.[14] Thus, the human has to realize that every single action upon the environment will be evaluated by Allah, whether it is good deed or bad deed.

The universe is under the controlling system of Allah the Almighty, who is the only *Rabb*, meaning the master, the nourisher, the sustainer and the guardian of the whole universe. In other words, Allah the Almighty directs and controls the universe systematically by establishing universal laws, which are known as *sunnatullah*.[15] The universe other than humankind has no choice but either willingly or unwillingly has to

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[11] *Ibid.*, 8 : 11.

[12] *Ibid.*, 59 : 1.

[13] *Ibid.*, 11 : 7.

[14] Sayyid Abū al-A`lā al-Mawdūdī, *Towards Understanding the Qur'ān* (Leicester: The Islamic Foundation, 2006), 449.

[15] Ismail R. al-Faruqi and Lois Lamya, *The Cultural Atlas of Islam*, trans. by Mohd Ridzuan Othman (Kuala Lumpur: Dewan Bahasa dan Pustaka, 1992), 336 .

submit to Allah.[16] Allah the Almighty creates humankind with two choices: either to submit to Him by following the *sunnatullah* or not. Those who submit will live on the earth in harmony with nature and will be rewarded in the hereafter days, while those who do not will live on the earth in difficulty and will be punished in the hereafter days. In guiding humankind to choose the right path, Allah the Almighty sends His messengers and gives them wisdom (reason).

Islamic faith emphasises the doctrine of *Tawhīd* or oneness of God, which means the faith rejects the doctrine of pantheism that believes the universe as a whole and nature in the widest sense are identical with God.[17] In other words, the Islamic faith upholds that the universe does not have divine attributions like the doctrine of pantheism but the universe that was created by Allah the Almighty demonstrates His magnificence. According to Ujang the universe's attributions are as below:[18]

a. *Mīzān* (Symmetry)

The entire universe including humankind exists symmetrically, which means everything is created by Allah the Almighty in pairs.[19] Every single pair exists in complementarity to each other, thus its existence is always in a state of balance. Because of the symmetry, every component of the universe moves in harmony following its own law that has been ascertained by God the Almighty upon it. As part of the universe, humankind has to respect the universe's symmetry and follow the universal measure in order to keep harmony with the universe.

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[16] al-*Qur'ān*, 3 : 83.

[17] Mautner ed., *The Penguin Dictionary of Philosophy*, 407.

[18] Zaini Ujang, "Islam dan Alam Sekitar", in *Islam dan Alam Sekitar*, ed. Zaini Ujang (Kuala Lumpur: Institut Kajian Dasar, 1993), 25–28.

[19] al-*Qur'ān*, 36 : 36.

b. *Tawāzun* (Equilibrium)

Because of symmetry, every component of the universe exists in a state of balance or *tawazūn*. Normally in Ecology, the state of balance is called equilibrium. In *Sūrah al-Raḥmān* verse 7 and verse 8, Allah the Almighty reveals that He has raised up the heaven and then has set a balance, so that humankind have to keep the balance and cannot transgress it.[20] According to al-Mawdūdī, most commentators have interpreted the word balance or equilibrium in these verses as signifying justice, which means that God the Almighty made justice embrace the entire universe.[21] Therefore, keeping the universe's equilibrium means upholding justice.

c. *Nasīm* (Flourish)

Literally, *nasīm* as an Arabic term means soft wind or breeze. In this regard, Allah the Almighty said in *surah al-A`rāf* verse 57:

> And it is He who sends forth winds as glad tidings in advance of His mercy, and when they have carried out a heavy-laden cloud, We drive it to the dead land, then We send down rain from it and therewith bring fruits of every kind. In this manner We raise the dead that you may take heed.[22]

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[20] *Ibid.*, 55 : 7–8.

[21] al-Mawdūdī, *Towards Understanding the Qur'ān*, 1108.

[22] a*l-Qur'ān*, 7 : 57.

In this verse, Allah the Almighty sends winds to the dead land in order to make it flourish, so that it can support living beings including humankind. Specifically, *nasīm* refers to fertile land (the Earth) that can support human survival instead of the Universe in general. Therefore, humankind has no right to make mischief on the Earth after it has been set in good order by God.

d. *Jamāl* (Beauty)

Allah the Almighty has created the universe with an accurate measure and has set up the whole universe in good order. Because of this, the universe is full of aesthetic values or *jamāl* (beauty). The aesthetic values can be found in the entire universe, in animals, plants and also in humankind. Allah the Almighty has ordained such attributes in *Sūrah al-Naḥl* verse 6 and Surah al-Hajj verse 5.[23] Moreover, Allah the Almighty symbolises the aesthetic values in His holy book, an adornment (*zīnah*), which humankind is offered for calmness and learning.[24] Such beauty can disappear if humans disrupt the natural balance.

Such attributes portray the magnificence of Allah the Almighty in creating and administrating the entire universe with a very comprehensive system. Although the universe moves by following its comprehensive system, it, and especially the Earth, is free to be affected by any alteration (*taskhīr*) by humankind.[25] In other words, humankind has a great potential to modify the natural landscape of the Earth. Actually, such potential is given by Allah to humankind in order to prepare them to

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[23] a*l-Qur'ān*, 16 : 6 and 22 : 5.

[24] *Ibid.*, 50 : 6 - 8

[25] al-Faruqi and Lamya, *The Cultural Atlas of Islam*, 337.

accomplish their duties as His vicegerents on the Earth. In this regard, Nasr has listed three main duties that have been imposed on humankind; first *`Ubudiyyah*, second *Khalīfah* and third *Amānah*.[26]

a. *`Ubudiyyah* (Servant of Allah the Almighty)

The first duty that has to be performed by humankind is to serve God the Almighty, as He has mentioned in the holy book that humankind is created for nothing else but to serve Him.[27] Serving Allah the Almighty means humankind have no choice except to perform all his commandments and avoid all his prohibitions without any right to question the reason. As servants of Allah the Almighty., humankind have to obey all His pre-destined plans and not disassociate themselves from the system of the universe. This duty prescribes humans not to destroy the nature because it is indeed Allah's properties.

b. *Khalīfah* (Vicegerent of Allah the Almighty)

In order to complement their duty as a servant of Allah the Almighty, humankind is also appointed by Him to be His *Khalīfah* or Vicegerent on Earth.[28] According to al-Mawdūdī, *Khalīfah* literally means one who exercises the authority delegated to him by his Principal.[29] The Principal here refers to Allah the Almighty, and humankind only exercise the authority delegated to them by Allah. In other

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[26] Seyyed Hossien Nasr, "Islam and Environmental Crisis", in *Islam and the Environment*, ed. A. R. Agwan (Kuala Lumpur: Synergy Book International, 1997), 21-22.

[27] al-*Qur'ān*, 51 : 56.

[28] *Ibid.*, 2 : 30.

[29] al-Mawdūdī, *Towards Understanding the Qur'ān*, 9.

words, humankind is not the master on the Earth permitted to do whatever they want, but His representative who needs to manage the nature properly.

c. *Amānah* (Trustee of Allah the Almighty)

Because their role is to exercise the authority delegated to them by Allah the Almighty, humankind have to accomplish this duty by regarding it as *Amānah* or trust. According to al-Mawdūdī, *Amānah* signifies the burden of responsibilities that Allah the Almighty has given humankind on the Earth after endowing them with reason as well as power and authority.[30] In al-Mawdūdī's opinion, humankind has a great responsibility to live with nature in harmony and also to avoid any destruction.

`Aqīdah in this regard plays a major role in establishing a harmonious worldview for the individual Muslim. Positively, the worldview not only contains dual polar relationships between humankind and nature, but also their relationships with God the Almighty. In this sense, the Islamic worldview is clearly different from the secular worldview that only perceives the dual polar relationship. The Islamic worldview is not only accepted as a concept supported by human reason, but every single Muslim must uphold it as an article of faith. As a belief, the Islamic worldview plays an influential role in determining an individual or group attitude to the environment.

Besides establishing worldview, *`Aqīdah* also reveals the answer to the question, what are human duties or human obligations on the Earth? In other words, *`Aqīdah* is considered as a Muslim's philosophy of life, by which a Muslim realises her duties and obligations. Every single Muslim has to believe that Allah the

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[30] *Ibid..*, 880.

Almighty does not create her for nothing, but to accomplish certain duties or obligations assigned by Him. In fact, Allah the Almighty has assigned humankind to be His servant (*`Ubudiyyah*), His vicegerent (*Khalīfah*) and His trustee (*Amānah*). In fact, all these duties and obligations complement each other, so that humankind has to perform them simultaneously. Only by performing these duties and obligations, will humankind live in harmony with nature.

7.1.2 The Role of *Sharī`ah* in Environmental Conservation

Basically, *Sharī`ah* is the second aspect of Islamic teachings referring to divine rules and laws revealed by Allah in the Holy *Qur'ān*, and extended by the Prophet's teachings in *al-Sunnah*.[31] Al-Qaradhāwī gave a wider definition, however, which includes any rule and law legislated by Allah the Almighty through *al-Qur'ān* and *al-Sunnah*, and also any extended rule and law established by *Ijmā`*, *Qiyās* and other sources.[32] On the basis of this definition, *Shari`āh* contains divine rules and laws related to every single aspect of human life, which are practised by an individual or a group like a family and also practised by Muslim rulers as state laws. Inevitably, among these divine rules and laws, there is a set of rules and laws related to environmental conservation.

Specifically, *Sharī`ah* guides humankind the way they should interact with God the Almighty, the way they should interact with each other and the way they should interact with nature. Thus, *Sharī`ah* pays great attention to environmental conservation by imposing on humankind certain divine rules and laws relating to the environment. Examples of these rules and laws are given below:

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[31] Md. Akhir Yaacub, *Undang-undang Islam dan Kewajipan Melaksanakannya* (Kelantan: Pustaka Reka, 1997), 28.

[32] al-Qaradhāwī, *Ri`āyah al-Bī'ah fi Sharī`ah al-Islām*, 21.

a. Rule on Water for Purification

Purification is compulsory for everyone whenever they prepare to perform prayer and other rituals. Hygienic water is the main tool for purification either for ablution or for taking a bath. According to al-Jazīrī, hygienic water is all types of water that come down from the sky, like rain, and all types of water that come out from the Earths like springs, which are still unpolluted.[33] As long as these types of water are unpolluted, they can be used for purification and washing. Therefore all water sources like springs, wells and rivers need to be protected from pollution. In this regard, the Prophet (pbuh) in a *Ḥadīth* narrated by al-Bukhārī from Abū Hurayrah has prohibited any one to urinate in inflow water that may pollute the water sources and prevent it being used for purification.[34] Clearly, the *Ḥadīth* orders every Muslim to conserve water sources and not to pollute them.

b. Rule on the Earth as a Mosque

According to *Sharī`ah*, every Muslim is allowed to perform prayer at any place on the Earth as long as the place is hygienic, because every part of the Earth is considered as a mosque. In a *Ḥadīth* narrated by al-Bukhārī from Jābir, the Prophet (pbuh) is reported as saying that among the privileges of his nation, Allah the Almighty made the Earth as a mosque.[35] This *Ḥadīth* allows everyone to perform prayer at any hygienic place on the Earth, and symbolically the *Ḥadīth* teaches every Muslim to keep the Earth clean by avoiding any pollution. Commonly, every Muslim

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[33] `Abd al-Raḥmān al-Jazīrī, *al-Fiqh `alā al-Madhāhib al-Arba`ah*, Vol. 1 (Cairo: Dār al-Ḥadīth, 1994), 28.

[34] al-Bukhārī, *Saḥīḥ al-Bukhārī*, 68

[35] *Ibid.*, 86.

considers a mosque as a sacred place, in which he is forbidden to spit or even to make noise. Moreover, the Prophet Muhammad (pbuh) prohibited those who eat raw onion and garlic from entering mosques because their smell may offend the public.[36] Clearly, the analogy of the Earth as a mosque indicates the duty of every Muslim not to pollute the environment.

c. Rule on *Ḥisbah*

Literally, *Ḥisbah* means the duty of commanding *ma`rūf* or good and forbidding *munkar* or evil.[37] Those who perform the duty are called *al-muḥtasib*. The Arabic term *ma`rūf*, which is mentioned at least 39 times in *al-Qur'ān*, refers to an action that produces benefits for either an individual or to society.[38] On the other hand, the Arabic term *munkar* means an action that produces harm to an individual or to society.[39] Actually, the concept of *Ḥisbah* has been practised in Islamic tradition as both a voluntary contribution and an official institution. Therefore, every Muslim has an obligation to command *ma`rūf* or good and forbid *munkar* or evil in his/her society. The voluntary contribution may involve an individual participation or a group involvement such as civil society in performing *Ḥisbah*, which inevitably includes the issue of environmental protection. In order to ensure *Ḥisbah* has been practised in a

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[36] Muḥyi al-Dīn Yahya Bin Sharf al-Nawāwī, *Ṣaḥīḥ Muslim bi Sharḥ al-Nawawi*, Vo. 5 (Cairo: Mu'asasah al-Mukhtār, 2001), 50-52.

[37] Llewellyn, "The Basis for a Discipline of Islamic Law", 220.

[38] Mawil Izzi Dien, "Islamic Ethics and Environment", in *Islam and Ecology*, ed. Fazlun M. Khalid and Joanne O'Brien, trans. by Baharin Ramly and Aini Majid (Pulau Pinang: Sahabat Alam Malaysia, 1997), 40.

[39] Hassan Salleh, *al-Qawā`id al-Fiqhiyah* (Kota Bharu: Pustaka Aman Press, 1984), 104.

society, the government has to establish it as an official institution. Among the tasks of the official institution is to protect the environment.[40]

These three examples are some of the substantive laws and rules that already exist in *Sharī`ah*, and which are closely related to environmental conservation. Therefore, Islamic environmental regulations are feasibly established. In fact, the establishment of environmental rules and laws can be considered as a practical dimension of Islamic Environmental Ethics. As discussed in Chapter 6, however, *Sharī`ah* also plays another vital role in this regard, which is to formulate environmental policy and environmental management by applying an appropriate approach in *Uṣūl al-Fiqh*. In Chapter six also, the application of this approach has been analysed by using the practice of *Ḥarīm* and *Ḥimā* as a case study. Thus, the application of *Fiqh* in formulating environmental policy and environmental management can be regarded as another practical dimension of Islamic Environmental Ethics.

Although Muslim jurists usually define *Fiqh* by remarking its difference from *Sharī`ah*, *Fiqh* is actually part of *Sharī`ah*. *Fiqh* refers to the knowledge that contributes to formulating *al-Aḥkām al-Shar`iyyah* (divine laws or divine rules) by using divine sources and other acknowledged sources like *Qiyās*.[41] According to Izzi Dien, the divine sources are *al-Qur'ān*, *al-Sunnah* and *Ijmā`*, while the human sources are *Qiyās*, *Istiḥsān* and *Sadd al-Dharā'i`*.[42] By referring to these sources, especially *al-Qur'ān* and *al-Sunnah* as the primary ones, Muslim jurists formulate religious laws

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[40] Izzi Dien, "Islamic Ethics and Environment", 42.

[41] al-Qaradhāwī, *Ri`āyah al-Bī'ah fi Sharī`ah al-Islām*, 21.

[42] Izzi Dien, *Islamic Law from Historical Foundations to Contemporary Practice*, v.

including those relating to environmental conservation. In this regard, *Fiqh* offers systematic methods to establish policies of development and also to formulate manuals of management towards environmental conservation.

Fiqh extends the capability of *Sharī'ah* to face modern issues such as the environmental crisis. Such issues have probably not been discussed in classical *Sharī'ah* law or in certain cases the issues have not been stated in order. Thus, according to Jenkins, *Fiqh* offers pragmatic sources, precisely because existing *Sharī'ah* law may inadequately address environmental issues.[43] In Chapter six, the analysis demonstrates the practice of *Ḥarīm* and *Ḥimā* as examples of Islamic environmental practice, almost similar to the contemporary establishment of protected areas. The practice of *Ḥarīm* and *Ḥimā* also indicates the dynamic application of *Fiqh* to environmental issues by use of acknowledged sources like *Maṣlaḥah al-Mursalah* and *Maqāṣid al-Sharī'ah*. Such sources have already emphasised the concept of values that is known in modern ethics as Axiology as well as the concept of duties that is known as Deontology. Therefore, by applying the Axiological and Deontological approaches, *Fiqh* offers another practical dimension of Islamic Environmental Ethics apart from the existing *Sharī'ah* laws.

7.1.3 The Role of *Akhlāq* in Environmental Conservation

The previous discussion on *Akhlāq* focuses on the theory of values or Axiology and the theory of duties or Deontology. In the context of this research, the discussion on both theories as has been done in chapter five is probably sufficient enough, because it is done only in considering their application in *Fiqh*. There is another perspective of *Akhlāq* that has not been adequately discussed in Chapter five,

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[43] Jenkins, "Islamic Law and Environmental Ethics", 341.

however, which is known in contemporary ethics as the theory of virtues. Basically, *Akhlāq* is very concerned with behaviour that may lead to an individual doing an action spontaneously, without any process of reasoning prior to the action.[44] In other words, the action is taken by an individual because of genuine habit that is moulded by his/her intrinsic virtues. Therefore, virtue may be considered as the pillar of *Akhlāq* because it emphasises character building that is usually generated by faith and rituals.

In Islamic teachings, the theory of virtues refers to *Taṣawwuf* or Sufism, which is considered as another theory of *Akhlāq* apart from the theory of values and theory of duties. In fact, in contemporary ethics, the theory of virtues is usually related to Psychology. Once again, one of the most prominent Muslim ethicists in this field was al-Ghazālī. According to Sherif, when al-Ghazālī classified knowledge into certain categories, he defined *Akhlāq* as the knowledge that deals with the way of how man ought to act in order to be good and virtuous in his character.[45] Based on this definition, the theory of virtues in *Akhlāq* emphasises the role of the soul and its purification. In this regard, al-Ghazālī suggested that virtues can be acquired in the following three ways; habituation, learning and divine generosity.[46]

Basically, *Taṣawwuf* or Sufism is practised as a way (*sulūk*) to produce pious Muslims by cultivating good character through the process of psycho-spiritual activities (*tazkiyah al-nafs*). According to al-Qaradhāwī, as *al-Dīn al-Mu`āmalah* (religion of coherence), Islam not only guides its followers in how to build a relationship with God the Almighty, but also how to interact with other creatures.[47] In

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[44] `Abd al-Laṭīf Muhammad al-`Abdī, *al-Akhlāq fi al-Islām* (Cairo: Maktabah Dār al-`Ulūm, 1985), 7.

[45] Mohamed Ahmed Sherif, *Ghazali's Theory of Virtue* (Albany: State University of New York Press, 1975), 4.

[46] *Ibid.*, 31.

[47] al-Qaradhawi, *Ri`āyah al-Bī'ah fi Sharī`ah al-Islām*, 26.

the context of Islamic Environmental Ethics, the role of *tazkiyah al-nafs* or self-purification is very important in order to cultivate good character, so that every Muslim may interact with nature in harmony. *Ṣifah al-Maḥmūdah* or good character leads a Muslim to build a good relationship with God the Almighty and also to build a good relationship with His natural world. The good characteristics in *Akhlāq* that are closely related to environmental conservation are as below:

a. *Qanā`ah*

The Arabic term *Qanā`ah* literally means contentedness, the opposite of *Ṭama`* or greed.[48] This is considered as a good characteristic in *Akhlāq*. According to al-Ghazālī, *Qanā`ah* is a characteristic of a pious Muslim who avoids being greedy and is always contented with what she/he has.[49] He added that those who have this characteristic only eat to fulfil their basic needs and keep food only for a period of a month or less.[50] Based on al-Ghazālī description's, clearly *Qanā`ah* is a characteristic that fits with the concept of Sustainable Development, and therefore guides every Muslim to adopt an environmentally-friendly lifestyle. A Muslim must not waste natural resources because Allah the Almighty hates those who consume something unwisely.[51] Thus, *Qanā`ah* in Muslim society can prevent over-exploitation or over-consumption of natural resources. In other words, *Qanā`ah* encourage every Muslim commit with green consumerism.

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[48] Muhammad Idris bin `Abd al-Ra'uf al-Marbawī, *Qāmūs al-Marbawī*, (Cairo: Dar al-Fikr, no date), 158.

[49] al-Ghazālī, *Iḥyā' `Ulūm al-Dīn*, Vol. 3, 310.

[50] *Ibid.*, 310.

[51] al-*Qur'ān*, 25 : 67.

b. *Maḥabbah*

Maḥabbah is derived from the Arabic term *ḥabba*, which literally means love.[52] Basically, every Muslim is required to love Allah the Almighty and His Prophet (pbuh) more than all else. Loving Allah and His Prophet should be first, and followed by loving others for the sake of Allah the Almighty. This principle of love is based on a *ḥadīth* narrated by Ānas bin Mālik in which the Prophet Muhammad (pbuh) said:

> Three signs: those who have them will achieve the sweet pleasure of faith; those who love Allah and His Prophet more than anyone else, those who love someone for the sake of Allah and those who hates to return to *kufr* (disbelief) after embracing Islam and hate to be thrown into the fire.[53]

The principle actually encourages humankind to love others including other creatures in nature for the sake of Allah the Almighty. In his book *Ri`āyah al-Bī'ah*, al-Qaradhāwī reported that the Prophet Muhammad (pbuh) manifested this principle of love by saying: 'Here is Ṭābah, and this is Uḥud, the mountain that loves us and we also love it'.[54] Al-Qaradhāwī then commented further that the Prophet's statement signified a very great example, when he portrayed the mountain of Uḥud like a human

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[52] Ḍīb al-Khudrāwī, *Qāmūs al-Alfāẓ al-Islāmiyyah* (Damascus: Al-Yamamah, 2002), 79.

[53] Abū al-Ḥusayn Muslim bin Hajjāj, *Ṣaḥīḥ Muslim* (Riyadh: Dār al-Salām, 1998), 40.

[54] al-Qaradhāwī, *Ri`āyah al-Bī'ah fi Sharī`ah al-Islām*, 30.

being that has emotion and heart.[55] Based on the Prophet's manifestation, the concept of *Maḥabbah* also includes love of other creatures for the sake of God the Almighty.

c. *Iḥsān*

The Arabic term *Iḥsān* means to perform an action in a perfect manner.[56] According to al-Qaradhāwī, Islam educates every Muslim to interact with all around him by applying *Iḥsān*, because he has been asked by the Prophet (pbuh) to do so in a *ḥadīth* narrated by Shaddād bin Aws.[57] In the *ḥadīth*, the Prophet (pbuh) said:

> Verily, Allah has prescribed *Iḥsān* with regard to all things, thus whenever you kill, do it in the best manner. And whenever you slaughter, do it in the best manner. Let one of you sharpen his knife, so that it gives ease to the animal.[58]

Thus, al-Qaradhāwī stated further that every Muslim must interact with the environment in the best manner, meanings by applying all qualities of *itqān* (neatness), *iḥkām* (preciseness), *ishfāq* (compassion), *ikrām* (respect) and *ḥannān* (kindness).[59] Basically, all these qualities build up the concept of *Iḥsān*. Humankind also need suitable knowledge about nature for instance ecology and geography to fulfil the qualities of *itqān* and *iḥkām*, prior to applying *Iḥsān* when they interact with

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[55] *Ibid.*, 30.

[56] al-Khudrāwī, *Qāmūs al-Alfāẓ al-Islāmiyyah*, 96.

[57] al-Qaradhāwī, *Ri`āyah al-Bī'ah fī Sharī`ah al-Islām*, 120.

[58] Muslim, *Ṣaḥīḥ Muslim*, 873.

[59] al-Qaradhāwī, *Ri`āyah al-Bī'ah fī Sharī`ah al-Islām*, 120.

the environment. Therefore, *Iḥsān* prepares every Muslim with the best environmental character, so that he will live in harmony with nature.

d. *Shukr*

The Arabic term *Shukr* literally means thankfulness or gratitude.[60] In the holy *Qur'ān*, God the Almighty has mentioned this term 74 times in various chapters. Among them is verse 152, *sūrah al-Baqarah*, when God the Almighty said:

> So remember Me and I shall remember you, and give thanks to Me and do not be ungrateful to Me for My favours.

Because *al-Qur'ān* repeats the word so many times, it is considered that *Shukr* is one of the most important parts of *Akhlāq*. According to al-Ghazālī, those who have such character can be recognised by three signs; first he intends to spread and to share the benefits that he has received with all creatures, second he demonstrates his thankfulness by always praising Allah and third he perform obligations that are commended by Allah and avoids whatever is prohibited by Him.[61] In al-Ghazālī's explanation, performing a good action upon nature is considered as one way to give thanks to God the Almighty. On the other hand, those who destroy nature can be considered as *kufr al-ni`mah* or ungrateful to Him for what He has given them.

These are some of the virtues in *Akhlāq* that are related to environmental conservation. In this regard, the theory of virtues can be applied to establish an

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[60] al-Khudrāwī, *Qāmūs al-Alfāẓ al-Islāmiyyah*, 221.

[61] al-Ghazālī, *Iḥyā' `Ulūm al-Dīn*, Vol. 4, 117.

environmentally-friendly lifestyle for an individual or a society. Perhaps, in order to promote such a lifestyle in Muslim societies, *tazkiyah al-nafs* that is always practised in *Taṣawwuf* or Sufism is the best way of achieving the purpose. While the Axiological approach and Deontological approach in *Akhlāq* emphasise more the theoretical dimension of Islamic Environmental Ethics, *Taṣawwuf* offers a practical approach by promoting an environmentally-friendly lifestyle in Muslim societies. Therefore, the theory of virtues in *Akhlāq* can be regarded as another alternative in the practice of Islamic Environmental Ethics.

7.2 Theoretical Dimension of Islamic Environmental Ethics

Probably the first question that has to be answered is, what is Islamic Environmental Ethics and does it exist? As has been suggested in Chapter two, Environmental Ethics is not only a moral practice but also a discipline of knowledge discussing the most appropriate value system in a society in the context of environmental conservation. Islamic Environmental Ethics is not merely an application of Islamic ethical principles for environmental issues, but also has to be considered as a new discipline or sub-discipline in Islamic knowledge. As a discipline of knowledge Islamic Environmental Ethics has its own theory and outlines its own practice in Muslim society.

Since the first Muslim response to environmental issues, Muslim scholars have discussed this topic deeply and have made many suggestions related to it. Most prefer to use the term 'Islamic Environmental Ethics' rather than 'Islamic Ethics of Environment'. The term 'Islamic Environmental Ethics' indicates it is a body of knowledge, not an extension of other knowledge (ethics) for discussing environmental issues. Perhaps, as discussed in Chapter two, the discourse on 'Islamic Ethics of

Environment' has already reached the point of institutional change to happen. Therefore, it is no longer just an application of Islamic ethical principles to environmental issues, but has progressed to a new discipline of knowledge entitled Islamic Environmental Ethics. Because it is now a discipline of knowledge, then it is possible to divide the discipline into theory and practice.

Although it is a new discipline in Islamic knowledge, it does not mean Islamic Environmental Ethics has to propose a new and separate epistemology. In this regard, Izzi Dien suggested that the ingredients for such a discipline are, in fact, no more than dissected parts of Islamic theology, Islamic laws and Islamic ethics because the discipline can only be valid if it is a fusion of the inseparable elements of Islam.[62] In other words, Islamic Environmental Ethics applies Islamic methods and maintains reference to divine sources, but since it is a discipline of knowledge all these activities are done systematically. Thus, all relevant methods in Islamic knowledge have to be organised and all divine sources have to be adjusted to match topics of Environmental Ethics. At the same time, the structure of contemporary Environmental Ethics can be assimilated as long as it is accepted by *al-Qur'ān* and *al-Sunnah*.

Therefore, if we acknowledge Islamic Environmental Ethics as a discipline of knowledge or body of knowledge, it deserves to be classified into theory and practice. Theory consists of basic concepts of environmental conservation from an Islamic perspective. Generally, the concepts can be divided into three main topics: environmental worldview from an Islamic perspective, environmental duties from an Islamic perspective and environmental values from an Islamic perspective. These topics may contain specific sub-topics, so that in this way the discipline of

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[62] Izzi Dien, *The Environmental Dimensions of Islam*, 81.

Environmental Ethics is organised systematically and structurally. This is indeed the most important attribution of a discipline of knowledge.

7.2.1 Environmental Worldview

The first important topic that establishes the Islamic theory of Environmental Ethics is environmental worldview. Basically, *`Aqīdah* must be the basis of environmental worldview from Islamic perspective. *`Aqīdah* answers great questions related to worldview: for instance, what is the origin of the universe? what is the concept of nature and what is the relationship of humankind with the environment? As has been explained before, the most important pillar of *`Aqīdah* is *Tawḥīd* or the doctrine of oneness of Allah the Almighty. Therefore, all these major questions related to worldview are already revealed by God the Almighty in *al-Qur'ān* and *al-Sunnah* based on *Tawḥīd*. Certainly, all Muslims regardless of their school unite in believing the doctrine of the oneness of Allah the Almighty, the most important pillar of their worldview.

Apart from *Tawhīd*, there was wide discourse on theology that also related to the concept of creation. The discourse of theology is prominently known in Islamic knowledge as *`Ilm al-Kalām*. Differently from *Tawhīd*, there were some schools of thought in *`Ilm al-Kalām* like al-Ashāi`rah and al-Mu`tazilah. Also there were some debates related to the concept of the universe in *`Ilm al-Kalām*, for instance, the debate between al-Ghazāli and Ibn Rushd. Among the questions in *`Ilm al-Kalām* that relate to an environmental worldview are: are there laws of nature? what is the doctrine of cause and effect: and is the universe alive? In this regard, *`Ilm al-Kalām* clearly can enrich an environmental worldview, so that such discourse should be re-stimulated when seen from an environmental perspective.

As discussed in Chapter six, practice of *Ḥarīm* and *Ḥimā* portrays an implementation of traditional ecological knowledge. As long as the knowledge does not oppose *Tawhīd* or doctrine of the oneness of God the Almighty, it can be accepted as part of an Islamic environmental worldview. In fact, Muslim societies have rich traditional ecological knowledge because their spread is very great, from Indonesia to Morocco. Practice of *Ḥarīm* and *Ḥimā* has shown that the Prophet and classical Muslim scholars paid great attention to the traditional ecological knowledge. Today, environmentalists have explored the world to seek traditional ecological knowledge that they believe offers a more harmonic worldview than the modern one. Therefore, the variety of traditional ecological knowledge across the Muslim world can enrich the existing Islamic environmental worldview.

In this context, Muslim scholars do not totally reject science, especially modern ecology, as a source of the Islamic environmental worldview. Although there are some theories in modern ecology which oppose *Tawḥīd* like Evolutionary Theory, there are also some points of convergence between modern ecology and Islam. For instance, both modern ecology and Islam agree that balance or equilibrium is among the important attributions of nature, and it should be preserved. Most recent environmental issues have been perceived through scientific knowledge, for instance, modern ecology, so it is important to Muslim scholars to assimilate such knowledge into Islamic teachings as long as it is verified by *al-Qur'ān and al-Sunnah.*

These four bases make the Islamic environmental worldview relevant to contemporary environmental issues, but most importantly it is rooted in the pillar of *Aqīdah* that is *Tawḥīd*. Based on this worldview, like other theories of environmental

ethics,[63] the Islamic perspective also proposes its own principles of Environmental Ethics:

> Principle 1: Everything in the universe including humankind and their environment is created by God the Almighty, and it does not exist by accident.
>
> Principle 2: God the Almighty has not created the universe including humankind for nothing, but He has specified the purpose of the creation in His holy books including *Qur'ān*.
>
> Principle 3: Everything in the universe is a sign showing and pointing to the transcendental being that is God the Almighty.[64]
>
> Principle 4: God the Almighty has created everything in the universe in due proportion and measure both quantitatively and qualitatively.[65]
>
> Principle 5: All creations of God the Almighty can be divided into physical creations and metaphysical creations, which require humans' concern whenever they take any action upon them.

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[63] For example, Deep Ecology proposes eight principles underpinning its worldview. See Arne Naess, "The Deep Ecological Movement: Some Philosophical Perspective", in *Environmental Ethics: Divergence and Convergence*, 2nd Edition, ed. Richard G. Botzler and Susan J Armstrong (Boston: McGraw Hill, 1998), 439 .

[64] Odzemir, *Human Attitude Towards Nature*, 185.

[65] Bakadar et.al., "Islamic Principles for the Conservation of the Natural Environment", 72.

Principle 6: Humankind is part of the universe, the components of which are complementary to one another in an integrated whole.[66]

Principle 7: The relationships of humankind and the universe are not one-to-one relationships, but both humankind and the universe have to manage the relationships according to their relationships with God the Almighty.

Principle 8: The universe including humankind and the environment totally belongs to Allah the Almighty, while the role of humans is only as His servants, His vicegerents and His trustees.

Principle 9: The right to utilise and exploit natural resources necessarily involves an obligation on man's part to conserve them both quantitatively and qualitatively.[67]

Principle 10: Because of their role as God's vicegerents and God's trustees, everyone will be judged by Him in the afterlife about their obligations.

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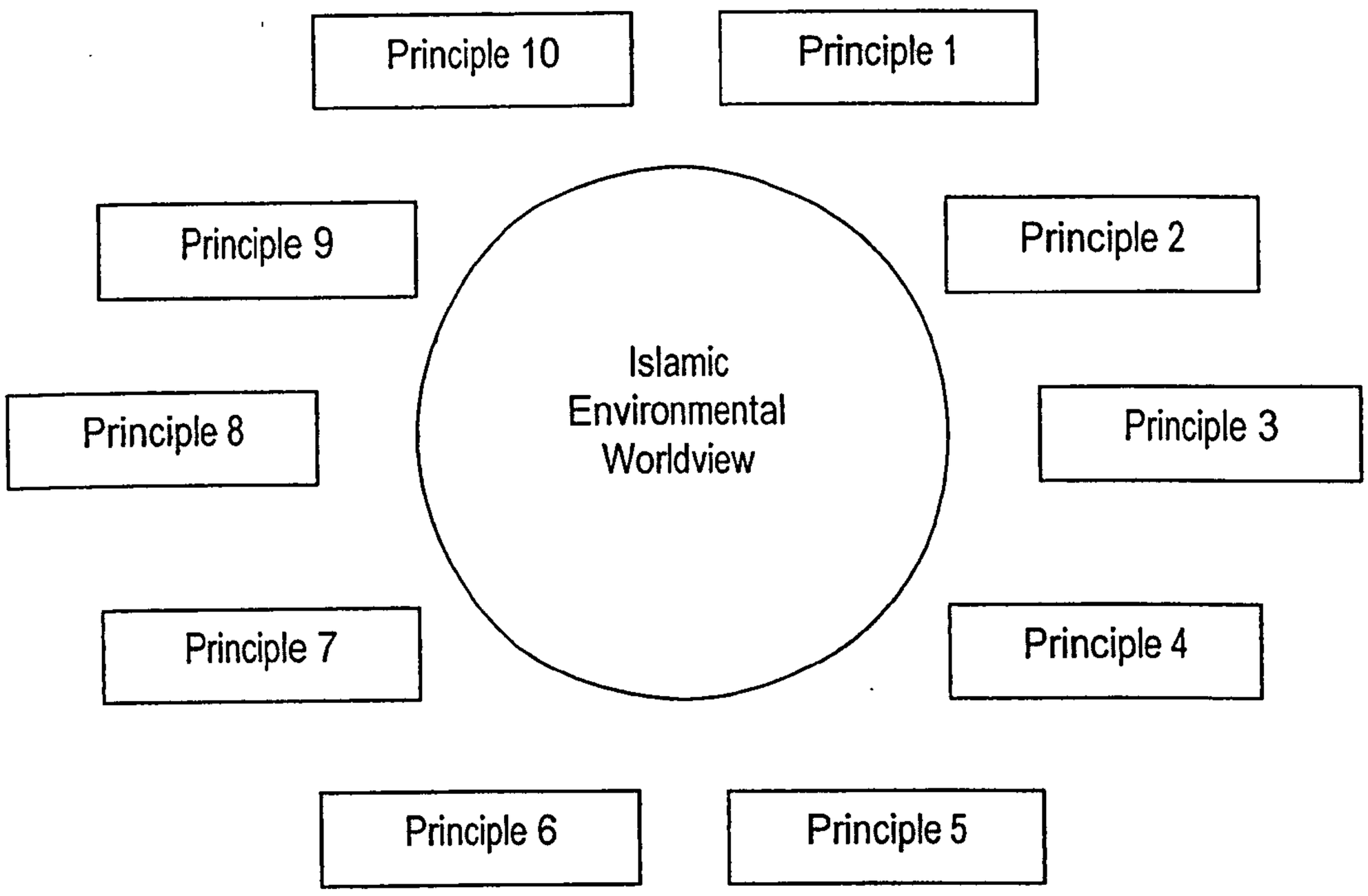
[66] *Ibid.*, 73.

[67] *Ibid.*, 74.

These principles can be considered as an Islamic Environmental Charter that can also be applied as a business charter of a private company and also as the basic principles of a state policy.[68] The figure below serves as an example:

Figure 7.1



Islamic Environmental Charter

[68] Izzi Dien has proposed a comprehensive Islamic Charter for Nature that consists of ten principles. See Izzi Dien, *The Environmental Dimension of Islam*, 153–154.

7.2.2 Environmental Values

Discourse on environmental values usually represents the major part of the theory of Environmental Ethics. As discussed in Chapter two, however, there is an important question pertaining to environmental values: what is the origin of environmental values; are they created by human beings or are they something that already exists in the world?[69] Such a question inevitably causes conflict, because different perspectives will surely perceive different values in evaluating human conduct upon the environment.[70] According to Palmer, there are two kinds of values involved in answering the question: first, subjective values that refer to intrinsic values created by humankind and attached to their lives; and second, objective values that refer to intrinsic values already existing in nature.[71] Islamic scholars should answer such questions in order to establish a comprehensive theory of Islamic Environmental Ethics.

Both kinds of values as suggested by Palmer actually refer to the same values, that is, intrinsic values. The difference is that the former is created by humankind and the latter already exists in nature. As discussed in Chapter two, because of the difference there are four contemporary perspectives on the theory of environmental ethics: Anthropocentrism, Biocentrism, Ecocentrism and Technocentrism. The term intrinsic values, however, has a variety of senses, so that many arguments on Environmental Ethics suffer from conflating them.[72] Besides intrinsic values, it is also possible to see extrinsic values or instrumental values as the basis of Environmental

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[69] Palmer, "An Overview of Environmental Ethics", 16.

[70] John O'Neill, Alan Holland and Andrew Light, *Environmental Values* (Oxford: Routledge, 2008), 4.

[71] Palmer, "An Overview of Environmental Ethics", 16-17.

[72] O'Neill, Holland and Light, *Environmental Values*, 114.

Ethics.[73] In this sense, the consensus among people to achieve certain positive goals can also be considered as environmental values. Therefore, what kind of values does the Islamic perspective suggest in establishing a theory of Environmental Ethics?

According to Izzi Dien, Islam assumes neither anthropocentric values nor non-anthropocentric values.[74] Islam assumes that the valuer is not a member of a particular species, but the Creator who creates all species.[75] In other words, Islam acknowledges the intrinsic values that already exist in the universe, but those values are recognised through revelations. In this regard, Islamic environmental values seem to agree with Biocentrism and Ecocentrism, which assume that the intrinsic values already exist in nature and are not created by humankind. According to Islam those values can be recognised by *al-Qur'ān* and *al-Sunnah* prior to human reasoning such as scientific knowledge and rational arguments as assumed by Biocentrism and Ecocentrism. Human reasoning can only be acknowledged if there is no such explanation in *al-Qur'ān* and *al-Sunnah*.

As has been explained before, Allah the Almighty created the universe to achieve certain purposes. For instance, one of the purposes of creation is to provide facilities for humankind to worship Allah and to serve other creatures. In other words, all creatures totally belong to Allah the Almighty, and He lends them to humankind as bounties (*ni`am*). Thus, the connotation of *ni`am* is everything totally belonging to Allah the Almighty and it is borrowed by humankind to facilitate their life. In this regard, *ni`am* can be considered as an intrinsic value because it indicates the value of something in the universe. Apart from viewing the purposes of the creation, *al-Qur'ān*

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[73] Palmer, "An Overview of Environmental Ethics", 16.

[74] Izzi Dien, *The Environmental Dimension of Islam*, 85.

[75] *Ibid.*, 85

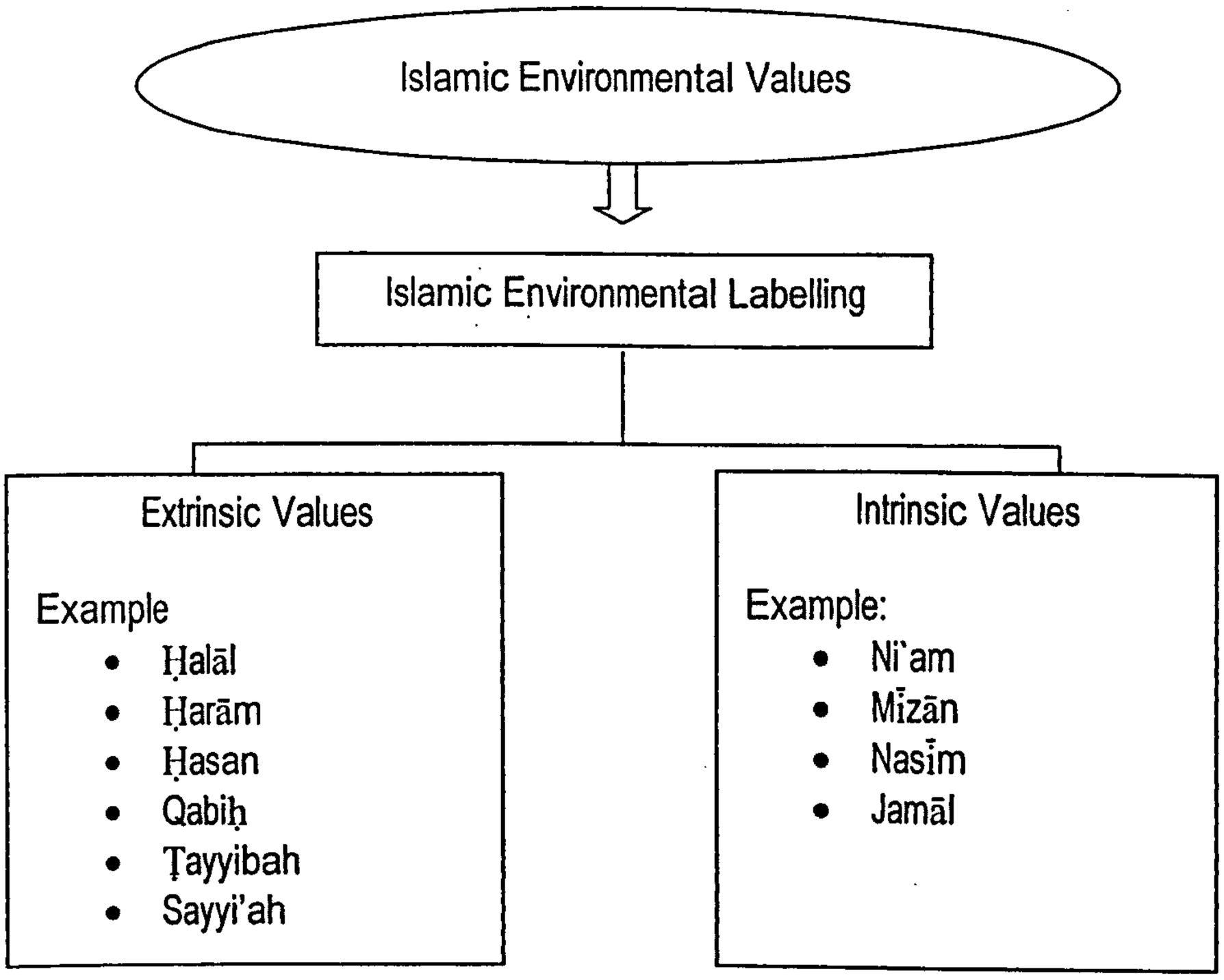
and *al-Sunnah* also explain the attributions of the creations such as *Mīzān*, *Nasīm*, *Jamāl* and *Zīnah*. Such attributions can also be considered as intrinsic values. Therefore, the Islamic perspective acknowledges intrinsic environmental values by perceiving them through *al-Qur'ān* and *al-Sunnah*.

Although Islamic environmental values seem to agree with Biocentrism and Ecocentrism, they also seem to agree with Anthropocentrism. In this regard, the Islamic perspective acknowledges extrinsic values or instrumental values, if the values are the means to achieve another positive goal. Once again, the valuer is not humankind, but the Creator. In other words, the goals to which the values lead are dictated by *al-Qur'ān* and *al-Sunnah*, not by human desires. Perhaps extrinsic values can also be accepted by other sources of *Sharīʿah* such as *al-Maṣlaḥah al-Mursalah*, *al-`Urf* and *Sadd al-Dharā`i*. As discussed in Chapter five, such sources represent the application of the Axiological approach in *Uṣūl al-Fiqh*. Thus, one of their roles is to determine the positive goals in formulating extrinsic environmental values.

As regards the extrinsic values, it is also possible to recognise the value of something according to the Islamic perspective. Normally, the values that are usually used, especially related to food, are *ḥalāl* and *ḥaram*. In the sense of extrinsic environmental values, it is also possible to use other values in Islamic glossaries such as *ḥasan* and *qabiḥ* or *ṭayyibah* and *sayyi'ah*. Such values can be used to evaluate whether something can be used or not according to environmental values. In other words, instead of using religious-free environmental values such as environmentally friendly and environmentally non-friendly, the Islamic perspective proposes religious or sacred environmental values including *ḥalāl* and *ḥaram*, *ḥasan* and *qabiḥ* or *ṭayyibah* and *sayyi'ah*.

Clearly, as mentioned by Izzi Dien, Islam proposes neither anthropocentric values nor non-anthropocentric values, but the values that are prescribed by the Creator of the universe.[76] Possibly, such values help to establish the theory of Islamic Environmental Ethics and can be transformed into practice by the establishment of Islamic standards of environmental labelling, similarly to Islamic standards of food labelling that is widely practised in Muslim countries. In order to establish Islamic standards of environmental labelling, more research will be needed. In the context of this research, I would like to propose only the category of Islamic environmental labelling as discussed previously. The figure below summarises the category of Islamic environmental labelling:

Figure 7.2



Category of Islamic Environmental Labelling

[76] *Ibid.*, 85.

7.2.3 Environmental Duties

Besides environmental worldview and environmental values, another important topic is environmental duties. As discussed in Chapter two, the discourse of environmental duties usually refers to Kantian ethics, especially his Categorical Imperative and Hypothetical Imperative, whereas from an Islamic perspective human duties to the environment are revealed by Allah the Almighty. Based on *al-Qur'ān* and *al-Sunnah*, human duties to the environment are bound by their duties to the Creator of the environment, Allah the Almighty. As explained before, Nasr suggested three main duties that have been imposed on humankind: first *`Ubudiyyah*, second *Khalīfah* and third *Amānah*.[77] Such duties actually mean that humans are answerable to Allah the Almighty, even though the duties need to be performed for the sake of the environment.

Based on *al-Aḥkām al-Shar`iyyah*, technically environmental duties can be classified into *wājib* (obligatory), *mandūb* (desired), *mubāh* (permissible), *makrūh* (reprehensible) and *harām* (forbidden).[78] For instance, building up green landscapes is considered *mandūb* and will be rewarded by Allah the Almighty in the hereafter. Such duty is considered *mandūb* because the Prophet (pbuh) is reported to have encouraged Muslims to plant trees even though doomsday is imminent.[79] In this regard, Izzi Dien observed: 'Even when all hope is lost, planting should continue, for planting is good in itself'.[80] Without the Islamic perspective, greening the Earth is only a human moral obligation, which has no justification in terms of the hereafter. From an Islamic

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[77] Seyyed Hossien Nasr, "Islam and Environmental Crisis", 21-22.

[78] Hanafi school of thought has different category of duties, as explained in Chapter five.

[79] Izzi Dien, "Islamic Environmental Ethics, Law and Society", 194.

[80] *Ibid.*, 194.

perspective, environmental duties can be considered as religious duties, so that every Muslim is answerable to Allah the Almighty.

In contemporary theory of Environmental Ethics, in the end, the discourse of environmental duties usually comes to the concept of environmental citizenship. Environmental citizenship or ecological citizenship refers to the new extension of human duties involving their duty to non-human beings, their duty to future generations and their duty to maintain the integrity of nature.[81] Therefore, environmental citizenship proposes a new demand for humans to take account of the impact of their activities on the environment and natural processes.[82] In this regard, Islamic environmental duties can also help to establish the concept of environmental citizenship. Moreover, with a complete list of Islamic environmental duties from Islamic teachings, it is also possible to establish the constitution of environmental citizenship from an Islamic perspective.

7.3 Practical Dimension of Islamic Environmental Ethics

Besides the theoretical dimension, as a discipline of knowledge Islamic Environmental Ethics can also be studied from a practical angle. Since Nasr's book *The Encounter of Man and Nature*, which represented the first Muslim response to environmental issues, most Muslim responses have been focusing on the theory of Islamic Environmental Ethics. In other words, the discourse of Islamic Environmental Ethics is usually concerned with environmental worldview, environmental values and environmental duties. Some researches tackled the practical dimension, but the numbers were very small. For example, in 1983 a group of Muslim scholars were

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[81] Philip W. Sutton, *The Environment: A sociological Introduction* (Cambridge: Polity Press, 2007), 52.

[82] *Ibid.*, 53.

involved in research that was done in order to recommend Islamic environmental regulations to the government of the Kingdom of Saudi Arabia.[83] According to Izzi Dien, the research could be used to provide grounds for Islamic legislation on the environment, but until today such legislation has not materialised.[84]

Practice of Environmental Ethics usually involves environmental regulation, environmental policy, environmental management and environmental education. Practising Environmental Ethics through such an approach inevitably needs political will, otherwise the Environmental Ethics remains in its theoretical form. However, before the political will takes place, there is an important stage where theory of Environmental Ethics is enabled to transform into practice. In contemporary ethics, this stage is usually called applied ethics. Any research that is done at this stage intends to develop the best approach to advance theory into practice, and it is usually known as applied research.[85] Therefore, the research done by a group of Muslim scholars in 1983, mentioned before, can be categorised as applied research in Islamic Environmental Ethics.

In order to develop the best approaches to practising Islamic Environmental Ethics, such research should be increased. As explained in Chapter one, among the objectives of my research is to formulate the application plan for Islamic Environmental Ethics as an extension to the theoretical and philosophical discourses. By focusing on *Ḥarīm* and *Ḥimā*, this research investigates the best approach to putting Islamic Environmental Ethics into practice. Based on the analysis on *Ḥarīm* and *Ḥimā* as a case study, this research proposes two approaches to practising Islamic

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[83] Izzi Dien, *The Environmental Dimension of Islam*, 5.

[84] *Ibid.*, 5.

[85] Michael Quinn Patton, *Qualitative Research and Evaluation Methods*, 3rd Edition (Thousand Oaks, CA: SAGE, 2002) 217.

Environmental Ethics; first, assimilation of *Sharī`ah* into environmental laws and rules and, second, application of *Uṣūl al-Fiqh* to environmental policy and management. Apart from these two approaches, there is another approach that can be used, which is the implementation of *Taṣawwuf* in environmental culture and lifestyle. This approach is not included in this research because of its lesser connection with *Ḥarīm* and *Ḥimā*.

7.3.1 Environmental Laws and Rules

The analysis on *Ḥarīm* and *Ḥimā* indicates that certain laws and rules in *Sharī`ah* can be assimilated to be practised as Environmental regulations. In this regard, practice of *Ḥarīm* and *Ḥimā* is almost similar to the contemporary practice of sustainable forestry and protected areas. As explained in Chapter six, *Ḥarīm* is defined as a forbidden or inviolate zone, land that cannot be developed in order to preserve the area from pollution and destruction,[86] while *Ḥimā* is defined as a protected or reserved zone, referring to land that is protected by the ruler or government for certain purposes like grazing and breeding or to keep the zone free from any development.[87] From the definition, clearly the practice of *Ḥarīm* and *Ḥimā* emphasises the importance of environmental conservation.

In fact, *Ḥarīm* and *Ḥimā* are among the *Sharī`ah* laws that directly relate to contemporary environmental issues. In other words, *Ḥarīm* and *Ḥimā* can be practised as one of the solutions to preserve ecosystem and biodiversity. As explained in Chapter four, protected areas and forest reserves refer to an area of land especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, which are managed through legal and other effective

[86] Llewellyn, "The Basis for a Discipline of Islamic Law", 210.

[87] Izzi Dien, *The Environmental Dimensions of Islam*, 196.

means.[88] Therefore, practice of *Ḥarīm* and *Ḥimā* can be seen as similar to the contemporary designation of protected areas and forest reserves, although *Ḥarīm* and *Ḥimā* has actually been practised since the period of the Prophet (pbuh). As discussed in sub-topic 7.1.2, there are other rules and laws in *Sharī'ah* that pay similar attention to environmental conservation, such as rules on water for purification, treating the Earth as a mosque and rules on *Ḥisbah*,

Therefore, the analysis of *Ḥarīm* and *Ḥimā* discloses an approach to practising Islamic Environmental Ethics which is the assimilation of existing laws in *Sharī'ah* with the contemporary practice of environmental conservation. Such an approach involves at least four processes: first, the process of identifying relevant laws and rules in *Sharī'ah*, second, the process of disseminating related *Sharī'ah* knowledge, third, the process of rebranding the contemporary environmental practice, and fourth, the process of institutionalising the related *Sharī'ah* laws.

a. Identifying Relevant Laws and Rules in *Sharī'ah*

The process of identifying relevant laws and rules in *Sharī'ah* inevitably needs the cooperation of two groups; Muslim jurists and environmental scholars. Both groups are important in order to discover which *Sharī'ah* laws are relevant to the current environmental issues. Such a process actually involves much research on *Sharī'ah* laws. Studying *Ḥarīm* and *Ḥimā* is considered as one of the research themes under this process. Through this process, the complete list of relevant *Sharī'ah* laws can be released for the next process.

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[88] Dudley and Philips, *Forest and Protected Area*, 3.

b. Disseminating Related *Sharī'ah* Knowledge

Disseminating related *Sharī'ah* knowledge is a process of upgrading research reports into knowledge. All the research reports on *Sharī'ah* laws related to environmental practice need to be published in formal or informal academic communications.[89] According to Ziman, any research finding is only transformed into knowledge if it has been published, and invites other researchers in the same academic community to justify the finding.[90] Disseminating the research findings on relevant *Sharī'ah* laws means the findings can be transformed into knowledge. Probably, this process will result in a new discipline or a new sub-topic in *Sharī'ah* that compiles all relevant *Sharī'ah* laws under a new theme, for instance, *al-Aḥkam al-Bī'ah* (environmental regulations).

c. Rebranding the Contemporary Environmental Practice

After the research findings have been acknowledged as *Sharī'ah* knowledge, then they can be matched with the relevant contemporary environmental practice. At this stage, the relevant *Sharī'ah* laws need to be prepared in order to replace the contemporary environmental practice, by ensuring their relevant roles and functions. For instance, in the case of *Ḥarīm* and *Ḥimā*, it is important to ensure the role and the function of *Ḥarīm* and *Ḥimā* match with the contemporary practice of protected areas and forest reserves. Appropriate terms need to be found, either the original *Sharī'ah* term or another suitable *Sharī'ah* term.

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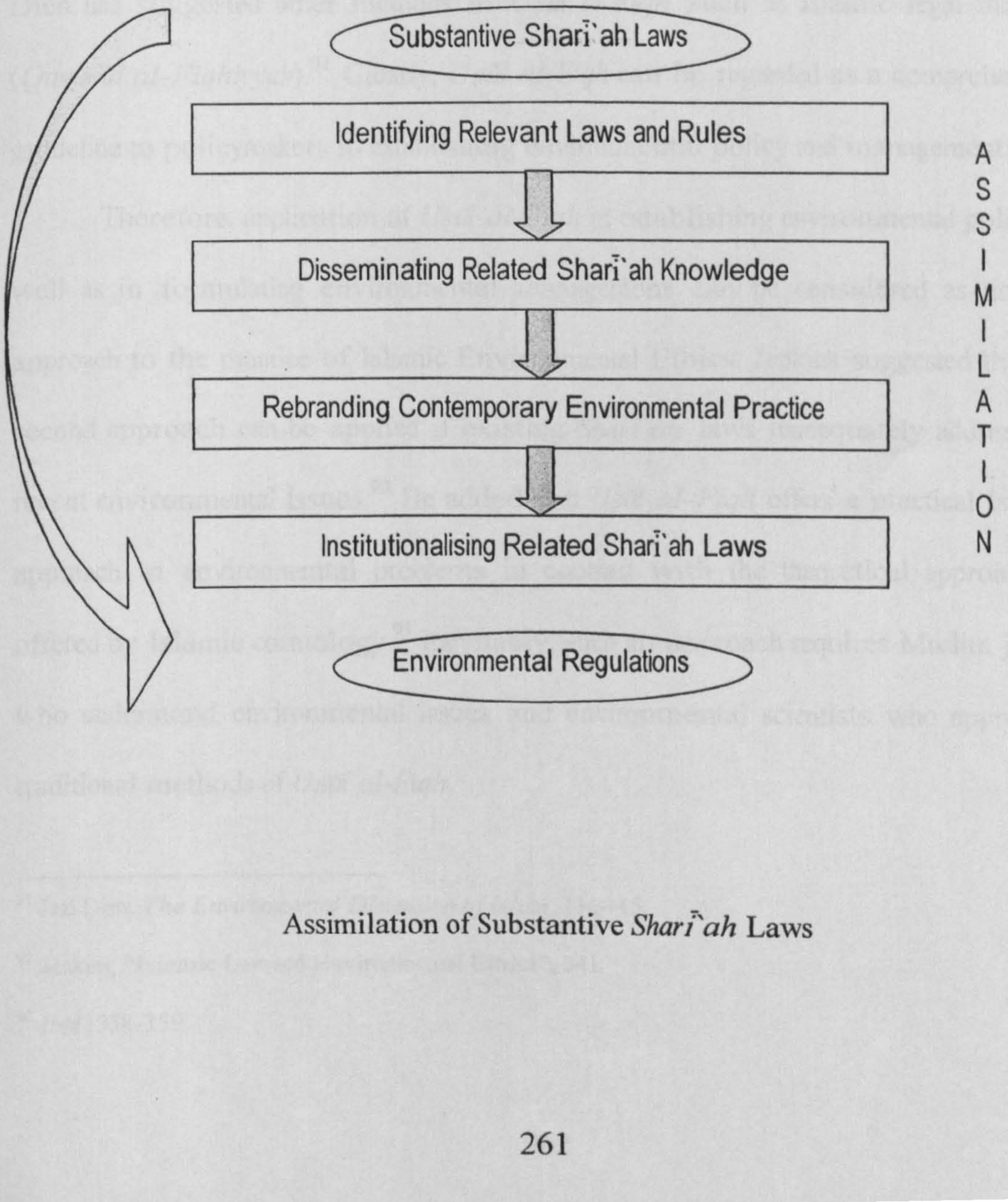
[89] Ziman proposed this process by using the term 'scientific communication'. See Ziman, *An Introduction to Sciences Studies*, 58–59.

[90] *Ibid.*, 58.

d. Institutionalising the Related *Sharī`ah* Laws

Finally, it is important to legalise the relevant *Sharī`ah* laws as an act. Such a process needs the involvement of lawmakers and politicians. At this stage the relevant *Sharī`ah* laws are no longer just knowledge but also an act that has a legal impact in a country. In the context of environmental regulations, *Sharī`ah* laws have great potential to be institutionalised as a credible environmental act, at least to be practised in Muslim countries. The figure below summarises all the processes of assimilation:

Figure 7.3



Assimilation of Substantive *Sharī`ah* Laws

7.3.2 Environmental Policy and Management

The analysis on *Ḥarīm* and *Ḥimā* also indicates that *Uṣūl al-Fiqh* offers very systematic methods to establish environmental policy as well as to formulate environmental management. As discussed in Chapter five, although the practice of *Ḥarīm* and *Ḥimā* was originally based on *al-Sunnah*, classical Muslim jurists had developed the practice in order to adapt to new circumstances. They applied suitable methods in *Uṣūl al-Fiqh* such as *Qiyās*, *al-Maṣlaḥah al-Mursalah*, *al-`Urf* and *Sadd al-Dharā`i* to extend the practice of *Ḥarīm* and *Ḥimā*. Besides these methods, Izzi Dien has suggested other methods in *Uṣūl al-Fiqh* such as Islamic legal maxims (*Qawā`id al-Fiqhiyyah*).[91] Clearly, *Uṣūl al-Fiqh* can be regarded as a comprehensive guideline to policymakers in establishing environmental policy and management.

Therefore, application of *Uṣūl al-Fiqh* in establishing environmental policy as well as in formulating environmental management can be considered as another approach to the practice of Islamic Environmental Ethics. Jenkins suggested that the second approach can be applied if existing *Sharī`ah* laws inadequately address the recent environmental Issues.[92] He added that *Uṣūl al-Fiqh* offers a practical Islamic approach to environmental problems in contrast with the theoretical approach as offered by Islamic cosmology.[93] Inevitably, such an approach requires Muslim jurists who understand environmental issues and environmental scientists who appreciate traditional methods of *Uṣūl al-Fiqh*.

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[91] Izzi Dien, *The Environmental Dimension of Islam*, 114-115.

[92] Jenkins, "Islamic Law and Environmental Ethics", 341.

[93] *Ibid.*, 358-359.

In fact, the most important process pertaining to the establishment of environmental policy and the formulation of environmental management is *Ijtihād* or *Fatwā* ruling. *Ijtihād* is a jurist's exertion of his reason to formulate the principles of the revealed law and apply them to new problems and situations.[94] At the higher authoritative level, *Ijtihād* is done by a group of Muslim jurists who are responsible in a Muslim country for *Fatwā* rulings.[95] Perhaps, *Ijtihād* and *Fatwā* rulings should be the first step in applying *Uṣūl al-Fiqh* in order to establish environmental policy and environmental management. This process helps to provide environmental axioms and environmental standards that are important for the formulation of environmental policy and management.

Usually, environmental policy consists of economics policies and social policies that are driven to achieve environmental goals. Sometimes, environmental regulations are also considered as part of environmental policy. According to Connelly and Smith, environmental policy should involve regulation enforcement, economic instruments and a voluntary approach.[96] In this regard, *Uṣūl al-Fiqh* can be applied to legalise suitable environmental regulations, to establish economic policy and to establish social policy, at least in Muslim countries. In order to achieve these goals, it is important to establish a *Fatwā* council or any authoritative *Sharī'ah* body that focuses only on environmental issues.

Apart from establishing environmental policy, the *Fatwā* council or the authoritative *Sharī'ah* body can also propose environmental standards than can be used to formulate environmental management. Today, environmental management

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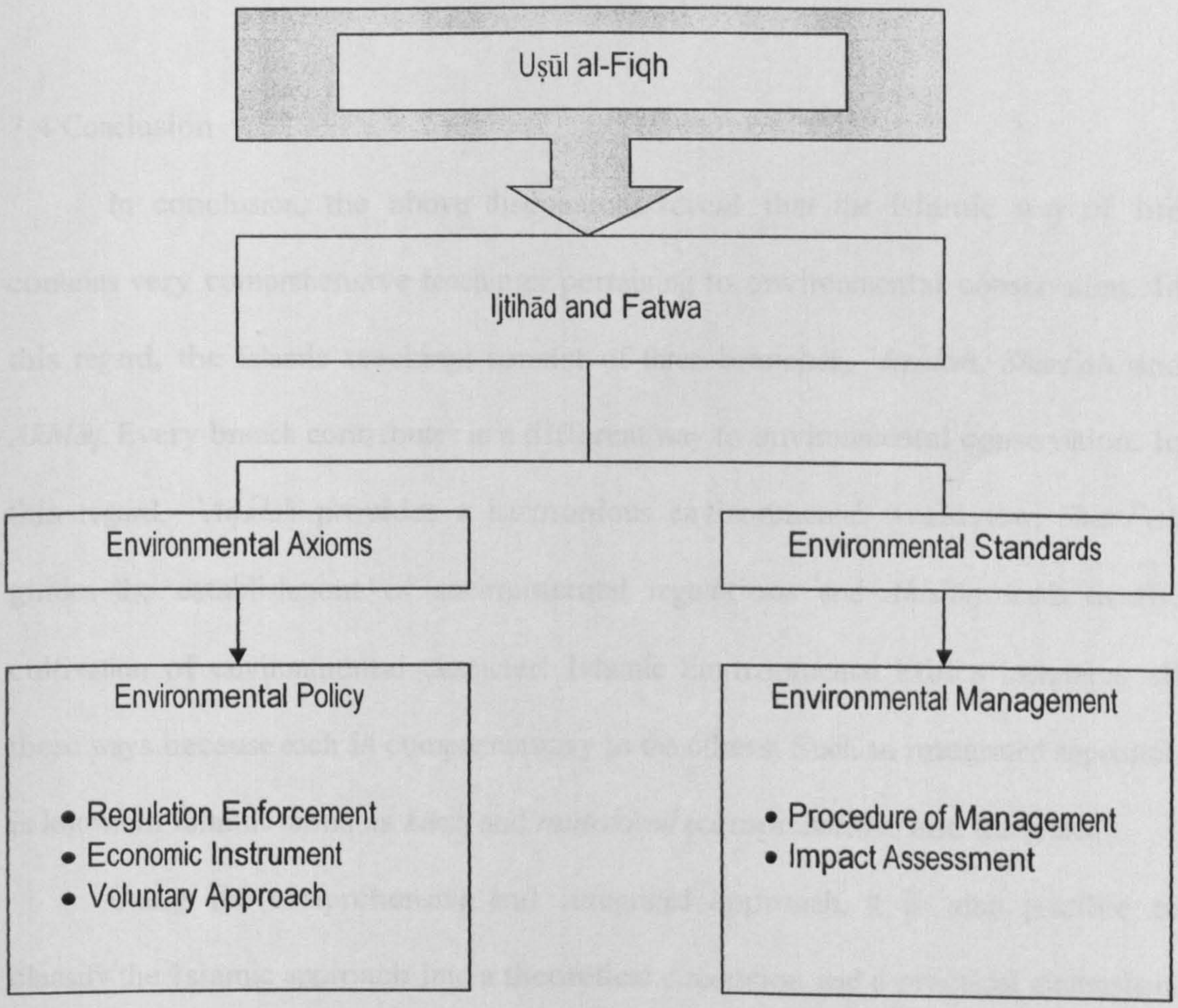
[94] Llewellyn, "The Basis for a Discipline of Islamic Environmental Law", 192.

[95] Izzi Dien, *Islamic Law from Historical Foundations to Contemporary Practice*, 144.

[96] Connelly and Smith, *Politics and the Environment from Theory to Practice*, 149-150.

usually involves two aspects; procedure (ISO 14000) and environmental impact assessment (EIA). ISO 14000 and EIA have no connection with Islamic environmental values, even if they are practised in a Muslim country. The standards that are represented by ISO 14000 and EIA are not derived from Islamic sources, so that they lack religious or sacred values. Therefore, applying Islamic environmental standards in procedures of environmental management and environmental impact assessment can be regarded as the practice of Islamic Environmental Ethics. The figure below summarises the application of *Uṣūl al-Fiqh* to environmental policy and management.

Figure 7.4



Application of *Uṣūl al-Fiqh*

7.3.3 Environmental Culture and Lifestyle

Another approach to practising Islamic Environmental Ethics is through *Taṣawwuf* or Sufism. In this regard, the role of *Taṣawwuf* is to guide practical ways for the cultivation of environmental character. Such an approach is important to support environmental education as part of the practical dimension. Environmental character refers to an environmentally-friendly culture and green lifestyle that motivate an individual and a community to live in harmony with nature. This approach has not been touched on here, as it has no direct connection with *Ḥarīm* and *Ḥimā*. Actually, environmental character represents the theory of virtue in Environmental Ethics, and it is quite new compared with the theory of value (Axiology) and theory of duty (Deontology).

7.4 Conclusion

In conclusion, the above discussions reveal that the Islamic way of life contains very comprehensive teachings pertaining to environmental conservation. In this regard, the Islamic teachings consist of three branches, *`Aqīdah*, *Sharī`ah* and *Akhlāq*. Every branch contributes in a different way to environmental conservation. In this regard, *`Aqīdah* provides a harmonious environmental worldview, *Sharī`ah* guides the establishment of environmental regulations and *Akhlāq* leads to the cultivation of environmental character. Islamic Environmental Ethics integrates all these ways because each is complementary to the others. Such an integrated approach is known in Islamic terms as *kāmil* and *mutakāmil* (comprehensive and integrated).

Using the comprehensive and integrated approach, it is also possible to classify the Islamic approach into a theoretical dimension and a practical dimension. The theoretical dimension usually involves environmental worldview, environmental

value and environmental duty, while the practical dimension involves environmental regulations, environmental policy and environmental culture. Study of *Ḥarīm* and *Ḥimā* discloses two approaches that can be developed in order to practise Islamic Environmental Ethics related to environmental regulation and environmental policy. The two approaches are the assimilation of *Sharī'ah* into environmental regulation and the application of *Uṣūl al-Fiqh* to environmental policy and management. Therefore, discourse of Islamic Environmental Ethics should be extended to the practical dimension instead of being limited to the theoretical dimension as in the past.

Chapter 8

Conclusion

8.1 Summary of Findings

This study was carried out in order to answer the question: what is the best approach to practising Islamic Environmental Ethics? Most of the previous studies on Islamic Environmental Ethics seem to focus on the theoretical dimension, which was very useful to strengthen recognition of Islamic Environmental Ethics as a discipline of Islamic knowledge. Because little research has focused on the practical dimension, the first step is to decide a suitable research design with reference to existing models of analysis. There are two models: a comparison between the existing Islamic environmental practice and the contemporary one, and identification of the Islamic principles that can be applied to put the theory of Islamic Environmental Ethics into practice.

Both models have been taken into account in this study in the choice of *Ḥarīm* and *Ḥimā* as a case study. As regards the first model, the practice of *Ḥarīm* and *Ḥimā* has been compared with the contemporary practice of sustainable forestry, especially the IUCN Categories of Protected Areas. As regards the second model, certain principles behind *Ḥarīm* and *Ḥimā* have been organised to formulate an application mechanism for practising Islamic Environmental Ethics. At the beginning of this study, the principles of Islamic jurisprudence (*Uṣūl al-Fiqh*) have been predicted as the principles behind *Ḥarīm* and *Ḥimā* that have to be examined. Therefore this study can be categorised as applied research which is intended to develop the best approach to turning theory into practice.

Before applying these models of analysis, it is necessary to evaluate the status of Islamic Environmental Ethics to see whether it is only an extension of Islamic ethics towards environmental issues or is indeed a new discipline of Islamic knowledge. The best way to evaluate its status is by comparing it with the status of Environmental Ethics in modern academia. Recently, Environmental Ethics has been considered as a discipline of knowledge rather than simply an ethical perspective related to environmental issues. Thus, as a discipline of knowledge, Environmental Ethics emphasises reasons to justify why an action upon the environment can be considered good or bad, not only a list of environmentally-friendly practices. Also, as a discipline of knowledge, Environmental Ethics inevitably has its own epistemology or theory of knowledge.

In this regard, Islamic Environmental Ethics is not merely an application of Islamic ethical principles for environmental issues, but also has to be considered as a new discipline or sub-discipline in Islamic knowledge. As such, Islamic Environmental Ethics has its own theory of knowledge but it does not mean that Islamic Environmental Ethics has to propose a new and separate epistemology. This study suggests that Islamic Environmental Ethics continues applying the existing methodology of Islamic knowledge and maintains reference to divine sources but, since it is a discipline of knowledge, all these activities are done systematically. Therefore, all relevant methods in Islamic knowledge have to be organised and all divine sources have to be adjusted to match topics of Environmental Ethics.

The theory of Environmental Ethics can be categorised into two sub-themes as explained in Chapter two; first, the theory of value or Axiology that justifies humans' treatment of their environment and, second, the theory of duty or Deontology that focuses on human obligation to the environment. Actually, there is another sub-theme

in theory of Environmental Ethics, the theory of virtue, but it is not considered further in this study. The discussion on both sub-themes is important because it reveals the proper approaches to transform the theory of Environmental Ethics into practice. In this context, the approaches to practising Environmental Ethics are the Axiological approach and the Deontological approach. Both have been applied in analysing the case of *Ḥarīm* and *Ḥimā*.

This study identifies a better way to understand the practical dimension of Environmental Ethics by exploring the concept of Sustainable Development. Recently, the concept of Sustainable Development had a significant influence on turning the theory of Environmental Ethics into practice. The concept of Sustainable Development also can be regarded as an extension of the theory of Environmental Ethics. Most global leaders acknowledge the concept of Sustainable Development not only as a global environmental agenda but also as global Environmental Ethics. Therefore, all agendas and policies that have been established to achieve Sustainable Development goals can be regarded as indirectly representative of the practical dimension of Environmental Ethics.

In order to elevate Sustainable Development to a global Environmental Ethics, two approaches are involved: a global society sharing the same ethical system that is the concept of Sustainable Development and the assimilation of the common principles of the concept into various backgrounds of the world's ethical systems. For the first approach, to be a new global ethics, the concept of Sustainable Development needs at least its own ethical judgement, values system and moral obligations. For the second approach, the common principles of Sustainable Development need to be assimilated into local ethical systems. In this regard, religion can be seen as one of the

most authoritative ethical systems that is still practised by most of the world's communities.

Therefore, the assimilation approach means adapting the common principles of Sustainable Development to local religious worldviews, morals and cultures. In other words, the second approach clearly demands religion's contribution to redefining the concept of Sustainable Development as well as to rebuilding the concept with religious norms and religious values. This study proposes that the second approach is more suitable for Muslim societies because, as suggested by contemporary Muslim scholars, Islam has its own approaches to achieving Sustainable Development. Basically, the Islamic approach of achieving Sustainable Development comprises two tasks: implementation of an Islamic economic system and the revitalisation of the traditional resource management institutions of Islam.

Further analysis of the second approach is provided in Chapter four. In this chapter, an agenda of sustainable development has been chosen, the concept of sustainable forestry. In fact, the concept of sustainable forestry was proposed by the UN through Agenda 21 and UNCED's Statement of Forest Principles after the Earth Summit in 1992. IUCN also proposed a practical way to achieve sustainable forestry, by suggesting IUCN Categories of Protected Areas. As an agenda for Sustainable Development, the concept of sustainable forestry actually represents the practical dimension of Environmental Ethics. Thus, in the context of this study, the concept of sustainable forestry has been analysed to illustrate the second approach.

This study suggests that the assimilation of the common principles of sustainable forestry into various backgrounds of the world community involves two models, which are Berkes's model and Gottlieb's model. Basically, these models are concerned with the role of indigenous knowledge and religious ethics in the context of

forest issues. Therefore, in order to explain the Islamic perspective on sustainable forestry, Berkes's model and Gottlieb's model have been taken into account in explaining the revitalisation of the traditional resource management institutions of Islam, which means *Ḥarīm* and *Ḥimā*. In other words, both models can also be used to guide the implementation of sustainable agendas in the context of applying traditional and religious approaches.

Before comparing the concept of sustainable forestry with *Ḥarīm* and *Ḥimā*, this study explored the role of ethics in *Fiqh* by looking at the relationships of ethics and regulations in Islamic theory of knowledge. It therefore provides better explanations about the role of the Axiological and Deontological approaches in Islamic Environmental Ethics. This study discovers that values and duties are already recognised in *Fiqh*, so that applying Axiological and Deontological approaches should not be unfamiliar. Their application in *Fiqh* has, however, to conform to *al-Qur'ān* and *al-Sunnah*, and is not solely based on rational and empirical reason as perceived by modern ethics.

The application of Axiological and Deontological approaches in *Fiqh* does not mean inventing a new way of making religious rules or *fatāwā*, but applying a new method in using the recognised sources. This study suggests that among the recognised sources pertaining to Axiological and Deontological approaches are *Maqāṣid al-Sharī`ah*, *al-hukm al-taklifī*, *al-hukm al-wad`ī*, *Sadd al-Dharā`i*, *al-`Urf* and *al-Maṣlaḥah al-Mursalah*. The theory of values can be seen in the application of *al-ḥākīm*, *al-Maṣlaḥah al-Mursalah*, *al-`Urf* and *Sadd al-Dharā`I*, while the theory of duties can be seen in the application of *al-hukm al-taklifī*, *al-hukm al-wad`ī* and *Maqāṣid al-Sharī`ah*. In the light of this finding, Islamic Environmental Ethics can be

practised by applying such methods of *Uṣūl al-Fiqh*, which are quite similar to the Axiological approach and Deontological approach in the Western tradition.

Apart from exploring the role of Axiological and Deontological approaches, this study also examines the role of reasoning in *Fiqh*. In order to discover a better standpoint on this issue, this study has chosen al-Ghazālī's writings as a yardstick. Al-Ghazālī's thoughts represent moderate Muslim scholars' response to the role of reasoning. This study finds that al-Ghazālī did not absolutely negate the role of reasoning (*`aql*), in spite of his rigid opinion that good and bad should be determined by revelations. He was probably influenced by his strong feelings against al-Mu'tazilah, so that he was seen as a scholar who totally rejected the application of reasoning. Al-Ghazālī agreed, however, to accept reasoning as an argument on three conditions; first to apply it together with *al-Istiṣḥāb*, second to justify conduct under the category *mubāh* and third to identify *maṣāliḥ* and *mafāsid* in *al-Maṣlaḥah al-Mursalah*.

Nowadays, most of the arguments explaining the status of environmental issues come from scientific knowledge and empirical findings. Therefore, the analysis of Axiological and Deontological approaches and the role of reasoning in *Fiqh* is important because it establishes the basis for practising Islamic Environmental Ethics. By considering this basis, this study explores further the specific practice of *Sharī`ah*, which can be regarded as very close to sustainable forestry. The specific practice of *Sharī`ah* that has been explored as a case study is *Ḥarīm* and *Ḥimā*. In fact, studying *Ḥarīm* and *Ḥimā* is very important because it explains that *Uṣūl al-Fiqh* is the key to practising Islamic Environmental Ethics. In other words, the practical element of Islamic Environmental Ethics is laid down in substantive Shari`*ah* laws and *Uṣūl al-Fiqh*.

The study of *Ḥarīm* and *Ḥimā* reveals that Islam has a wealth of regulations related to environmental conservation, especially sustainable forestry, which have been practised since the period of the Prophet Muhammad (pbuh). Moreover, the study discovers that the practice of *Ḥarīm* and *Ḥimā* is not only concerned with environmental conservation but is also related to religious obligations and duties, which will be judged by Allah the Almighty in the hereafter days. The practice of *Ḥarīm* and *Ḥimā* consolidates aspects of ecological knowledge, application of divine rules and appreciation of ethical purposes. Clearly, *Ḥarīm* and *Ḥimā* ratify the potency of applying Islamic practices to face contemporary issues and provide a clear approach to turning the theory of Islamic Environmental Ethics into practice.

Studying *Ḥarīm* and *Ḥimā* in this sense is an attempt to pay more attention to the status of land-use in Islamic land regulation rather than the right of ownership. In the context of Islamic land regulation, this study suggests that there must be reconciliation between the right of the landlord to develop his/her land and the right of government to insist on suitable land-use in the public interest. Therefore, the contemporary discourse on land regulation in *Fiqh* has to pay great attention to the status of land-use. Study of *Ḥarīm* and *Ḥimā* also discloses two approaches that can be developed for the practice of Islamic Environmental Ethics which are related to environmental regulation and environmental policy. The two approaches are the assimilation of substantive *Sharī'ah* laws into environmental regulation and the application of *Uṣūl al-Fiqh* to environmental policy and management

Finally, this study proposes a general framework for practising Islamic Environmental Ethics. As a discipline of Islamic knowledge, Islamic Environmental Ethics must be classified into theory and practice. The theory of Islamic Environmental Ethics consists of basic concepts of environmental conservation from

an Islamic perspective, which can be divided into three main topics: environmental worldview from an Islamic perspective, environmental duties from an Islamic perspective and environmental values from an Islamic perspective. As disclosed by the analysis of *Ḥarīm* and *Ḥimā*, the practice of Islamic Environmental Ethics has two approaches: the assimilation of substantive *Sharī'ah* laws into environmental regulation and the application of *Uṣūl al-Fiqh* to environmental policy and management. Besides these two approaches, certain aspects of the Islamic environmental worldview, environmental values and environmental duties can also be developed as practice: for instance, as an Islamic environmental charter, Islamic standards of environmental labelling and an Islamic constitution for environmental citizenship.

8.2 Future Research

As mentioned before, Environmental Ethics consists of three theories: theory of value, theory of duty and theory of virtue. In this study, however, only two theories have been discussed, the theory of values and the theory of duty. Discussion of ethics in *Sharī'ah*, especially in *Uṣūl al-Fiqh*, involves the theory of values and theory of duty. The theory of virtue has been discussed briefly in sub-topics 7.1.3 and 7.3.3 which consider its similarity to *Taṣawwuf* or Sufism. Actually, discourse of virtue in contemporary ethics only reappeared in Western philosophical thought in the twentieth century. The development of psychology in the nineteenth century possibly revived interest in this theory after it suffered a decline during the early modern period.

The theory of virtue in Environmental Ethics can be considered as a new perspective compared with the other two theories. In the context of Islamic

Environmental Ethics, the theory of virtue refers to *Taṣawwuf* or Sufism. Remarkably, as explained in sub-topics 7.1.3 and 7.3.3, *Taṣawwuf* or Sufism has been concerned with environmental matters since the period of the Prophet (pbuh). In this regard, *Taṣawwuf* offers practical guides for the cultivation of environmental character, which is important to promote an environmentally-friendly culture and green lifestyle in a community. Such an approach is important to support environmental education as part of the practical dimension. Therefore, it is suggested that future researchers should develop this topic to portray a holistic framework of Islamic Environmental Ethics.

As applied research, this study has also introduced certain directions in which the Islamic environmental worldview, environmental values and environmental duty can be developed and practised. This study proposes three new research themes pertaining to the practice of Islamic Environmental Ethics: an Islamic Environmental Charter, Islamic Standards of Environmental Labelling and an Islamic Constitution for Environmental Citizenship. In fact, these three themes have been taken into account in current discourse of Environmental Ethics especially pertaining to Sustainable Development.

In the context of Muslim society, research on these three themes will extend their faith into action, which can be considered as part of the practical dimension of Islamic Environmental Ethics. In this regard, this study suggests future researchers need to develop models of Axiological and Deontological approaches in *Fiqh*, as the research design for developing the Islamic Environmental Charter, Islamic standards of Environmental Labelling and Islamic Constitution for Environmental Citizenship. In other words, studying on three themes will complement the previous research on Islamic Environmental Ethics, and will illustrate a comprehensive framework or blueprint of Islamic Environmental Ethics.

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Bibliography

al-`Ālīm, Yusuf Hāmid. *al-Maqāṣid al`Āmmah li al-Sharī`ah al-Islāmiyyah*. Riyadh: al-Dār al-`Ālamiyyah li al-Kitāb al-Islāmi, 1994

al-Āmidī, `Alī bin Muhammd. *al-Iḥkām fi Uṣūl al-Aḥkām*. Beirut: Maktabah al-Islamī, 1982

`Abd al-Ra'ūf, Muhammad. *A Muslim's Reflection on Democratic Capitalism*. Washington: American Enterprise Institute of Public Policy Research, 1984

`Abd al-Salām, Abū Muḥammad `Izz al-Ḍīn. *Qawā`id al-Aḥkām fi Maṣaliḥ al-Anām*. Beirut: Dar al-Kutub al-`Ilmiyyah, 1999

al-`Abdī, `Abd al-Laṭīf Muhammad. *al-Akhlāq fī al-Islām*. Cairo: Maktabah Dār al-`Ulūm, 1985

Abū Dāwud, Sulaymān bin al-Ash`ath. *Sunān Abī Dāwud*. Beirut: Dār al-Jinān, 1988

Adams, W. M.. "Rationalization and Conservation: Ecology and the Management of Nature in the United Kingdom". *Transaction of the Institute of British Geography*, New Series. Vol. 22, No. 3 (1997): 277 – 291

Adams, William Mark. *Green Development: Environment and Sustainability in the Third World*, 2nd Edition. London: Roultledge, 2001

Allaby, M.. *Dictionary of Environment*. London: Macmillan Press, 1979

Ansari, Mohamed I.. "Islamic Perspective on Sustainable Development". *American Journal of Islamic Social Sciences*. Vol. 11, No. 3 (1994): 394-402.

Atkinson. Andrian. *Principles of Political Ecology*. London: Belhaven Press, 1991

Attfield, Robin. "Saving Nature, Feeding People and Ethics". In *Environmental Ethics An Anthology*, ed. Andrew Light and Holmes Rolston III. Malden: Blackwell, 2003

Attia, Gamal Eldin. *Towards Realization of the Higher Intents of Islamic Law*. London: The International Institute of Islamic Thought, 2007

Auda, Jasser. *Maqāṣid al-Shari`ah as Philosophy of Islamic Law a Systems Approach*. London: The International Institute of Islamic Thought, 2008

Baharuddin, Azizan. "Science, Values and the Environment: On the Need for a Coherent and Holistic Worldview". In *Environment and Development: Ethical and Educational Consideration*, ed. Azizan Baharuddin. Kuala Lumpur: Institut Kajian Dasar, 1995

Bakadar, Abubakar Ahmad, et. al.. "Islamic Principles for the Conservation of the Natural Environment". In *Islam and the Environment*, ed. A. R. Agwan. Kuala Lumpur: Synergy Books International, 1997

Begader, Abu Bakar Ahmad, et.al.. *Environmental Protection in Islam*. Cambridge and Switzerland: IUCN, 1994

Bakar, Osman. "Kata Penghantar". In *Sains, Teknologi, Kesenian dan Agama*, ed. Osman Bakar and Azizah Hamzah. Kuala Lumpur: University of Malaya Press, 1992

Bakar, Osman. *Tawhid and Science*. Kuala Lumpur: Secretariat for Islamic Philosophy and Science, 1991

Baker, Susan. *Sustainable Development*. Oxon: Routledge, 2006

Baldwin, J. M. ed.. *Encyclopaedia of Philosophy and Psychology*. New Delhi: Cosmo Publications, 1986

Barr, Stewart. *Environment and Society: Sustainability, Policy and the Citizen*. Aldershot, Hampshire: Ashgate Publishing, 2008

Bayle, Alan E. "The Rio Convention on Biological Diversity". In *International Law and the Conservation of Biological Diversity*, ed. Catherine Redgwell and Michael Bowman. London: Kluwer Law International, 1996

Beder, Sharon. *The Nature of Sustainable Development*. Newham: Scribe Publications, 1993

Begon, Michael, Collin R. Townsend, and John L. Harper. *Ecology from Individual to Ecosystem*, 4th Edition. Malden: Blackwell, 2006

Berkes, Fikret. *Sacred Ecology: Traditional Ecological Knowledge and Resources Management*. Philadelphia: Taylor and Francis, 1999

Berman, Harold J.. *The Interaction of Law and Religion*. London: SCM Press, 1974

Bertens, K.. *Etika dan Moral*. Kuala Lumpur: University of Malaya Press, 2003

Blackburn, Simon, *Being Good: A Short Introduction to Ethics*. Oxford: Oxford University Press, 2001

Blowers, Andrew, and Pieter Glasbergen eds.. *Environmental Policy in an International Context: Prospect*. London: Arnold, 1996

Bosselmann, Klaus. "Ethical Implication". In *The Law of Energy for Sustainable Development*, ed. Adrian J Brandbrook, Rosemary Lyster, Richard L. Ottinger and Wang Xi. New York: Cambridge University Press, 2005

Bosworth, C. E., E. Van Donzel, W. P. Heinrichs, and C. H. Pellat, eds.. *Encyclopaedia of Islam*, New Edition. Leiden: E. J. Brill, 1991

Botzler, Richard G., and Susan J. Amstrong, "Introduction". In *Environmental Ethics Divergence and Convergence*, 2nd edition, ed. Richard G. Botzler and Susan J. Amstrong. Boston: McGraw Hill, 1998

Boyd, J. M.. "The Role of Religion in Conservation". *The Environmentalist*, 4 (1984): 40 - 44

Brown, Lester R., C. Flavin, and S. Postel. "Dunia Sedang Terancam". In *Dunia Terancam*, ed. Lester R. Brown. et.al.. Kuala Lumpur: INSAN, 1990

al-Bukhārī, Abū `Abdullah Muhammad bin Ismāi`l. *Saḥīḥ al-Bukhārī.* Riyadh: Bayt al-Afkār al-Dawliyah, 1998

Bullock, Allan, and Stephen Trombley. *The New Fontana Dictionary of Western Thought*, 3rd Edition. London: Harper Collins Publishers, 1999

Caldwell, Lynton Keith, and Kristin Sharon Shrader-Frechette. "Reconsidering Land Policy an Introduction". In *Policy for Land: Law and Ethics*, ed. Lynton Keith Caldwell and Kristin Sharon Shrader-Frechette. Lanham: Rowman & Littlefield, 1993

Carney, Frederick S.. "Some Aspect of Islamic Ethics". *The Journal of Religion.* Vol. 63. No. 2 (April, 1983): 159 - 174

Carson, Rachel. *Silent Spring.* Boston: Houghton Mifflin, 1962

Cobb, J.. "Ecology, Ethics and Theology". In *Valuing The Earth: Economics, Ecology and Ethics*, ed. H. E. Daly and K. N. Townsend. Cambridge: MIT Press, 1993

Cobb, John B. Jr.. "Toward a Just and Sustainable Economic Order". In *Environmental Ethics An Anthology*, ed. Andrew Light and Holmes Rolston III. Malden: Blackwell, 2003

Collin, P. H.. *Dictionary of Ecology and the Environment.* Middlesex: Peter Collin Publishing, 1988

Connelly, James and Graham Smith. *Politics and the Environment from Theory to Practice*. 2nd Edition. London: Routledge, 2003

Cook, Michael. *Commanding Right and Forbidding Wrong in Islamic Thought.* Cambridge: Cambridge University Press, 2000

Cooper, David E., and Joy A. Palmer eds.. *Spirit of the Environment*. London: Routledge, 1998

Cowie, A. P. et.al.. *Oxford Learner's Pocket Dictionary.* Oxford: Oxford University Press, 1990

Craig, Edward ed.. *Routledge Dictionary of Philosophy.* London and New York: Routledge, 1998

al-Dhahabī, Shams al-Dīn Muhammad. *Kitāb al-Kabā'ir.* Beirut: al-Maktabah al-Thaqafiyyah, no date

Dobel, Patrick. "The Judeo-Christian Stewardship Attitude Toward Nature". In *Environmental Ethics Reading in Theory and Application*, ed. Louis P. Pojman. Boston: Jones and Bartlett Publishers, 1994

Dudley, Nigel, and Andrian Philips. *Forest and Protected Area: Guidance on the Use of the IUCN Protected Area Management Categories*. Gland: IUCN, 2006

Eblen, R. A,. and W. Eblen. *The Encyclopedia of the Environment.* Boston: Houghton Mifflin Company, 1994

Eckerman, Ingrid. *The Bhopal Saga Causes and Consequences of the World's Largest Industrial Disaster.* Hyderabad: Universities Press, 2005.

Edward, Paul ed.. *The Encyclopedia of Philosophy.* New York: MacMillan and Free Press, 1967

Elliott, S.."Philosophical Problems for Environmentalism". In *Environmental Ethics*, ed. R. Elliot. Oxford: Oxford University Press, 1995

Engel, J. Ronald. "Introduction: The Ethics of Sustainable Development". In *Ethics of Environment and Development: Global Challenge and International Response*, ed. J. Ronald Engel, Joan Gibb Engel. Tucson: The University of Arizona Press, 1990

Ester, Peter, Henk Vinken, Solange Simoes, and Midori Aoyagi-Usui,. "Culture and Sustainability", in *Culture and Sustainability A Cross-National Study of Cultural Diversity and Environmental Priorities among Mass Publics and Decision Maker*, ed. Peter Ester, Henk Vinken, Solange Simoes and Midori Aoyagi-Usui (Amsterdam: Dutch University Press, 2003)

Fakhri, Majid. *Ethical Theories in Islam*, 2nd Edition. Leiden: E.J. Brill, 1994

Fanzeres, Anna, and Kristiina A. Vogt. "Other Relevant Initiatives in Forest Certification". In *Forest Certification: Roots, Issues, Challenges and Benefits*, ed. Kristiina A. Vogt, Bruce C. Larson, John C. Gordon, Daniel G. Vogt and Anna Fanzeres. Florida: CRC Press LCC, 2000

al-Faruqi, Ismail R., and Lois Lamya. *The Cultural Atlas of Islam*. trans. from English into Malay by Mohd Ridzuan Othman. Kuala Lumpur: Dewan Bahasa dan Pustaka, 1992

Flavin, Christopher. "Dunia Semakin Panas". In *Mengenai Isu-isu Alam Sekitar Dunia*, ed. Lester R. Brown. Kuala Lumpur: Pan Asian Business Service, 1994

Flew, Antony. *A Dictionary of Philosophy*. London: Pan Books Ltd., 1979

Foltz, Richard C., Frederick M. Denny, and Azizan Baharuddin eds.. *Islam and Ecology: A Bestowed Trust*. Harvard: Centre for Study of World Religions, Harvard Divinity School, 2003

Geist, Helmut. *The Causes and Progression of Desertification*. Hants: Ashgate Publishing, 2005

Ghanem, Y., and J. Eighmy. "Hema and Traditional Use Management among Arid Zone Villagers of Saudi Arabia". *Journal of Arid Environment*. Vol. 7 (1984): 287-297.

al-Ghazālī, Abū Ḥāmid Muḥammad. *al-Iqtiṣād fi al-I`tiqād*. Beirut: Dar al-Maktabah al-Hilal, 1993

al-Ghazāli, Abū Hāmid Muhammad. *al-Mankhūl min Ta`liqāt al-Uṣūl*. ed. Muhammad Ḥasan Haytu. Damascus: Dar al-Fikr, 1998

al-Ghazāli, Abū Hāmid Muhammad. *Al-Mustaṣfā min `Ilm al-Uṣūl*. Cairo: Dār al-Baṣā'ir, 2007

al-Ghazāli, Abū Hāmid Muhammad. *Iḥya' U`lūm al-Dīn*. Beirut: Sharkah Dār al-Arqam Bin Abī al-Arqam, 1998

Gillis, Malcolm. "Indonesia: Public Policies, Resources Management and the Tropical Forest". In *Public Policy and the Misuse of Forest Resources*, ed. Robert Rapetto and Malcolm Gillis. Cambridge: The Press Syndicate of the University of Cambridge, 1989

Gilphin, Alan. *Dictionary of Environmental Terms*. Queensland: University of Queensland Press, 1976

Goldsmith, Edward. *The Way: An Ecological View*. Devon: Themis Books, 1996

Gottlieb, Roger S.. "Religion in an Age of Environmental Crisis". In *This Sacred Earth Religion, Nature and Environment*, ed. Roger S. Gottlieb. New York: Routledge, 2004

Gottlieb, Roger S.. *A Greener Faith: Religious Environmentalism and Our Planet's Future*. New York: Oxford University Press, 2006

Goudie, Andrew. *The Human Impact on the Natural Environment*, 5th Edition. Oxford: Blackwell Publisher Ltd., 2000

Graham, Gordon. *Eight Theories of Ethics*. London: Routledge, 2004

Grainger, A.. "Improving the Monitoring of Deforestation in the Humid Tropics". In *Tropical Rain Forest-Ecology and Management*, ed. S. L. Sutton, T. C., Whitmore and A. C. Chadwick. Oxford: Blackwell Scientific Publications, 1983

Grainger, A.. "Rates of Deforestation in Humid Tropics: Estimates and Measurements". In *The Human Impact Reader Reading and Case Studies*, ed. Andrew Goudie. Oxford: Blackwell Publisher Ltd, 1997

Grainger, J. and A. Ganadilly. "Hemas: An Investigation into a Traditional Conservation Ethic in Saudi Arabia", *Journal of the Saudi Arabian National History Society*, Vol. 2, No. 6 (July 1986): 28 – 32

Grey, William. "Anthropocentric and Deep Ecology". *Australian Journal of Philosophy*, Vol. 71, No 4 (1993): 463 - 475

al-Ḥākim, Abū `Abdullah Muhammad bin `Abdullah. *al-Mustadrak `Alā al-Ṣaḥīḥayn*. Beirut: Dar al-Kutub al-`Ilmiyah.

Hallman, David G. ed.. *Ecotheology Voices From South and North*. Geneva: WWC Publications, 1994

Hamed, Safei-Eldin A.. "Capacity Building for Sustainable Development: The Dilemma of Islamization of Environmental Institutions". In *Islam and Ecology: A Bestowed Trust*, ed. Richard C. Foltz, Frederick M. Denny and Azizan Baharuddin. Cambridge: Center for the Study of World Religion, Harvard Divinity School, 2003

Hamid, Abdul Wahid. *Islam the Natural Way*. Revised Edition. Witlshire: MELS, 2004

Hammad, Ahmad Zaki Mansur. *Abu Hamid al-Ghazali's Juristic Doctrine in al-Mustasfa min 'Ilm al-Usul with a Translation of Volume I al-Mustafa min 'Ilm al-Usul*. PhD Dissertation, Illinois: University of Chicago, March 1987

Hardin, Garrett. "The Tragedy of the Commons". *Science 162*, whole no. 3859, December 13 (1968): 1243 – 1248

Hardin, Garrett. "Lifeboat Ethics: The Case against Helping the Poor". *Psychology Today*. Vol. 8 (1974): 38-43

Hasan, Zubair. "Sustainable Development from an Islamic Perspective: Meaning, Implications and Policy Concern". *JKAU: Islamic Econ.*. 19 (9) (2006): 3 - 18.

Hassan, Abul, Abdel Kader Chachi, A. M Sadeq, and V. Murinde. "The Role of Islamic Financial Institutions in Sustainable Development". In *Islamic Finance and Economic Development*, ed. Munawar Iqbal and Ausaf Ahmad. Palgrave MacMillan, 2005

Hastings, J. ed.. *Encyclopaedia of Religion and Ethics*. New York: Charles Scribner & Sons, 1912

Hens, Luc, and Bashkar Nath. "Introduction and Acknowledgment". In *The World Summit on Sustainable Development: The Johannesburg Conference*, ed. Luc Hens and Bashkar Nath. Dordrecht: Springer, 2005

Hill, Ian. *Forest Management in Nepal Economics and Ecology*. Washington, The World Bank, 1999

Holdgate, Martin, and Andrian Phillips. "Protected Areas in Context". In *Integrated Protected Area Management*, ed. Michael Walkey, Ian R. Swingland and Shaun Russell. Boston: Kluwer Academic Publishers,1999

Hourani, George F.. "Ghazali on Ethics of Action". *Journal of the American Oriental Society*. Vol. 96, No. 1, January – March (1976): 69 - 88

Hourani, George F.. *Islamic Rationalism: The ethics of `Abd al-Jabbār*. Oxford: Claredon Press, 1971

Hourani, George F.. *Reason and Tradition in Islamic Ethics*. Cambridge: Cambridge University Press, 1985

Huckle, John., and Adrian Martin. *Environment in a Changing World*. Harlow: Prentice Hall, 2001

Hughes, J Donald, and Mark R. Stoll. *The Mediterranean: An Environmental History*. Santa Barbara: ABC-CLIO, 2005

Hughesand, Donald J., and J. V. Thirgood. "Deforestation, Erosion and Forest Management in Ancient Greece and Rome". *Journal of Forest History*, Vol. 26, No. 2 (1982): 60 - 75

Ibn Ḥazm, `Alī Bin Aḥmad. *al-Muḥallā bi al-Āthār*. Beirut: Dār al-Fikr, n.d.

Ibn Miskawayh, Abī `Alī Aḥmad Bin Muḥammad. *Tahdhīb al-Akhlāq wa Tathīr al-A`rāq*, ed. Imād Ḥamūdī al-Hilālī. Baghdad: Manshurāt Talī`ah al-Nūr, 2005

Ibn Nujaym, Zayn al-`Ābidīn bin Ibrāhim. *al-Ashbāh wa al-Naẓā'ir*. Beirut: Dar al-Kitab al-`Ilmiyyah. 1993

Ibn Qudāmah, Abū Muhammad `Abdullah bin Aḥmad. *al-Mughnī wa Sharḥ al-Kabīr*. Beirut: Dār al-Fikr, 1994

Ibn Rushd, Abū Walīd Muhammad bin Aḥmad. *Bidāyah al-Mujtahid wa Nihāyah al-Muqtaṣid*. Beirut: Maktabah al `Aṣriyah, 2004

International Union for Conservation of Nature and Natural Resources (IUCN). *World Conservation Strategy*. Gland: IUCN, 1980

Irving, Thomas B., Khurshid Ahmad, and M. Manazir Ahsan. *The Qur'ān Basic Teachings*, 2nd Revised Edition. Leicester: The Islamic Foundation, 2002

IUCN Commission on National Parks and Protected Areas. *Guideline for Protected Areas Management Categories*. Gland: IUCN, 1994

Izzi Dien, Mawil. "Islam and the Environment, Theory and Practice" *Journal of Beliefs and Values*. No 18 (1997): 47 - 57

Izzi Dien, Mawil. "Islamic Environmental Ethics, Law and Society". In *Ethics of Environment and Development: Global Challenge, International Response*, ed. J. Ronald Engel and Joan Gibb Engel. Tucson: The University of Arizona Press, 1990

Izzi Dien, Mawil. "Islamic Ethics and Environment". in *Islam and Ecology*, ed. Fazlun M. Khalid and Joanne O'Brien, trans. from English into Malay by Baharin Ramly and Aini Majid. Pulau Pinang: Sahabat Alam Malaysia, 1997

Izzi Dien, Mawil. *Islamic Law from Historical Foundations to Contemporary Practice*. Edinburgh: Edinburgh University Press, 2004

Izzi Dien, Mawil. *The Environmental Dimensions of Islam*. Cambridge: Lutterworth Press, 2000.

Jackson, Andrew R. W. and Julie M. Jackson. *Environmental Science the Natural Environment and Human Impact*. Essex: Longman, 1996

James, N. D. G.. *A History of English Forestry*. Oxford: Blackwell, 1981

Jardins, Joseph R. Des. *Environmental Ethics An Introduction to Environmental Philosophy*, 3rd Edition. Australia: Wadsworth Thomson Learning, 2001

al-Jazīrī, `Abd al-Raḥmān. *al-Fiqh `alā al-Madhāhib al-Arba`ah*. Cairo: Dār al-Ḥadīth, 1994

Jenkins, Willis. "Islamic Law and Environmental Ethics: How Jurisprudence (*Usul al-Fiqh*) Mobilizes Practical Reform". *Worldview: Environment, Culture, Religion*. Vol. 9, No. 5 (2005): 338 - 364

Johnson, Martha ed., *Lore Capturing Traditional Environmental Knowledge*. Ottawa: Dene Cultural Institute and International Development Research Centre, 1992

Joma, Hesam A. M.. *The Earth as a Mosque: Integration of Traditional Islamic Environmental Ethics with Agricultural and Water Development Policies in Saudi Arabia*. Doctoral Dissertation, PhD in City Planning, University of Pennsylvania, 1991

al-Juwaynī, Abu Ma`āli `Abd al-Mālik bin `Abdullah. *al-Burhān fi Uṣūl al-Fiqh*. ed. `Abd al-`Āẓīm al-Deeb. Egypt: al-Wāfa', 1998

Kadikon, Sulaiman. *An Analysis of Islamic Environment Ethics with Special Reference to Malaysia*. PhD Dissertation University of Wales Lampeter, 2004

Kamali, Mohammad Hashim. *Principles of Islamic Jurispridence*. Cambridge: Islamic Text Society, 1991

Kemp, Ronald H.. "ITTO and Conservation of Biological Diversity". In *Conserving Biological Diversity in Managed Tropical Forest*, ed. Jill M. Blockhus, Mark Dillenbeck, Jefrry A. Sayer and Per Wegge. Gland: IUCN, 1992

Kessler, Winifred B., Hal Salwasser, Charles W. Cartwright Jr., and James A. Caplan. "New Perspective for Sustainable Natural Resources Management". *Ecological Applications*. Vol. 2, No. 3 (August, 1992): 221 – 225

Khallāf, `Abd al-Wahhāb. *`Ilm Ūṣūl al-Fiqh*. Cairo: Dar al-`Aqīdah, 2006

Khasawneh, Alaa Abd al-Hadi M.. *Environmental Aspects of Islamic Architecture*. MPhil Dissertation, University of Wales Lampeter, 2005

al-Khudrāwī, Ḍīb. *Qāmūs al-Alfāẓ al-Islāmiyyah*. Damascus: Al-Yamamah, 2002

Kilani, Hala, Assaad Serhal, and Othman A. Llewellyn. *Al-Hima a Way of Life*. Amman: IUCN West Asia, 2007

Kinsley, David. *Ecology and Religion*. New Jersey: Prentice Hall, 1995

Klooster, Daniel James. "Toward Adaptive Community Forest Management: Integrating Local Forest Knowledge with Scientific Forestry". *Economic Geography*. Vol. 78, No. 1 (Jan., 2002): 43 - 70

Krapivin, Vladimir F., and Kostas A. Varotsos. *Globalization and Sustainable Development: Environmental Agendas*. Chichester: Praxis Publishing, 2007

LaDuke, Winona. "Traditional Ecological Knowledge and Environmental Future". In *Liberating Faith: Religious Voice for Justice, Peace and Ecological Wisdom*, ed. Roger S. Gottlieb. Lanham: Rowan & Little Field Publishers, 2003

Leopold, Aldo. "The Land Ethics", in *A Sand Almanac with Essays on Conservation from Round River*. New York: Oxford University Press, 1966

Lillie, William. *An Introduction to Ethics*. London: Methuen, 1995

Lincoln, R. J., G. A. Boxshell, and P. F. Clerk. *A Dictionary of Ecology, Evolution and Systematics*. London: Cambridge University Press, 1982

Linzey, Andrew, and Dan Cohn-Sherebok eds.. *After Noah: Animals and the Liberation of Theology*. London: Mowbray, 1997

Llewellyn, Othman A.. "The Basis for a Discipline of Islamic Law". In *Islam and Ecology*, Cambridge, ed. Richard C. Foltz, Frederick M. Denny and Azizan Baharuddin. Massachusetts: Center for the Study of World Religions, Harvard Divinity School, 2003

Mackinnon, Malcom H.. "The Longevity of the Thesis: A Critique of the Critics". In *Weber's Protestant Ethic: Origin, Evidence, Context*, ed. Hartmut Lehmann and Guenther Roth. New York: Press Syndicate of the University of Cambridge, 1995

Maḥmūd, `Abd al-Ḥalīm. *Qadiyyah al Taṣawwuf al-Muqidh min al-Ḍalāl*. Cairo: Dar al-Ma`rifah, 1988

Mālik, bin Anas. *al-Muwaṭṭā'*, ed, Muhammad Fuad `Abd al-Bāqī. Cairo: Dar Ihya' al-Kutub al-`Arabiyyah, n.d.

al-Marbawī, Muhammad Idris bin `Abd al-Ra'uf. *Qāmūs al-Marbawī*. Cairo: Dar al-Fikr, no date

Mautner, Thomas ed.. *The Penguin Dictionary of Philosophy*. London: Penguin Books Ltd, 2000

al-Mawdūdī, Sayyid Abū al-A`lā. *Towards Understanding the Qur'ān*. Leicester: The Islamic Foundation, 2006

McCloskey, John. "Ecological Ethics and Its Justification: A Critical Appraisal". In *Environmental Philosophy*, ed. D. Mannison, M. McRobbie, and R. Routley. Canberra: Department of Philosophy, Australian National University, 1980

Meadows, Donella H., Dennis L. Meadows, Jergen Randers, and William W. Behrens III. *The Limits to Growth*. New York: Universe Book, 1972

Miṣbāḥ, Mujtabā. *Falsafah al-Akhlāq: Dirāsah Muqāranah Bayna al-Madhāhib al-Akhlāqiyyah*, trans. by Muhammad Ḥasan Razāqiṭ. Beirut: Ma`had al-Rasūl al-Akram, 2002

Mitlin, Diana, and David Satterthwaite. "Sustainable Development and Cities". In *Sustainability, the Environment and Urbanization*, ed. Cedric Pugh. London: Earthscan, 1996

Monto, Mani, L. S. Ganish, and Koshy Varghese. *Sustainability and Human Settlements: Fundamental Issues, Modeling and Simulations*. New Delhi: SAGE, 2005

Munn, R. E.. "Towards Sustainable Development: An Environmental Perspective". In *Economics and Ecology: Towards Sustainable Development*, ed. F. Archibugi, and P. Nijkamp. Dordrecht:Kluwer Academic Publications, 1989

Muschett, F Doughlas. "An Integrated Approach to Sustainable Development". In *Principle of Sustainable Development*, ed. F Doughlas Muschett. Delray Beach: St Lucie Press, 1997

Muslim, Abū al-Ḥusayn bin Hajjāj. *Ṣaḥīḥ Muslim*. Riyadh: Dār al-Salām, 1998

Naess, Arne. "Sustainable Development and Deep Ecology". In *Ethics of Environment and Development Global Challenge, International Response*, ed. J. Ronald Engel and Joan Gibb Engel. Tucson: The University of Arizona Press, 1990

Naess, Arne. "The Deep Ecological Movement: Some Philosophical Perspective", in *Environmental Ethics: Divergence and Convergence*, 2nd Edition, ed. Richard G. Botzler and Susan J Armstrong. Boston: McGraw Hill, 1998.

Nasr, M. "Prospect of Desertification for Egypt and Libya". In *Environmental Challenges in the Mediterranean 2000 - 2050*, ed. Antonio Marquina. Dordrecht: Kluwer Academic Publisher, 2004

Nasr, S. Hossien. "Islam and Environmental Crisis". In *Islam and the Environment*, ed. A. R. Agwan. Kuala Lumpur: Synergy Book International, 1997

Nasr, S. Hossien. *An Introduction to Islamic Cosmological Doctrines*. trans. from English into Malay by Baharuddin Ahmad. Kuala Lumpur: Dewan Bahasa dan Pustaka, 1992

Nasr, S. Hossien. *The Encounter of Man and Nature: The Spiritual Crisis of Modern Man*. London: George Allen and Unwin Ltd., 1968

al-Nawāwī, Muhy al-Din Yahyā bin Sharīf. *Riyāḍ al-Ṣāliḥīn min Kalam Sayyid al-Mursalīn*. Beirut: Muassasah Manahil al-I`rfan, n.d.

al-Nawāwī, Muḥyi al-Dīn Yahya bin Sharf. *Rawdah al-Ṭālibīn wa `Umdah al-Muftīn*. Beirut: Dar al-Fikr, 1995

al-Nawāwī, Muḥyi al-Dīn Yahya bin Sharf. *Ṣaḥīḥ Muslim bi Sharḥ al-Nawawi*. Cairo: Mu'asasah al-Mukhtār, 2001

O'Neill, John, Alan Holland, and Andrew Light. *Environmental Values*. Oxford: Routledge, 2008

O'Riordan, T., *Environmentalism*. London: Pion Limited, 1976

Olafson, F. A.. *Ethics and Twentieth Century Thought*. New Jersey: Prentice Hall, 1973

Orlove, Benjamin S., and Stephen B. Brush. "Anthropology and the Conservation of Biodiversity". *Annual Review of Athoropology*. Vol. 25 (1996): 329 - 352

Palmer, C. A.. *Process Theology and the Challenge of Environmental Ethics*. D.Phil. Thesis, Oxford University, 1992

Palmer, Clare. "An Overview of Environmental Ethics". In *Environmental Ethics An Anthology*, ed. Andrew Light and Rolston Holmes III. Malden: Blackwell Publishing, 2003

Palmer, Martin and Victoria Finlay. *Faith in Conservation: New Approach to Religions and the Environment*. Washington: The World Bank, 2003

Park, Chris. *The Environment: Principles and Applications*, 2nd Edition. London: Routledge, 1997

Patton, Michael Quinn. *Qualitative Research and Evaluation Methods*, 3rd Edition. Thousand Oaks, CA: SAGE, 2002

Peck, Tim. *The International Timber Trade*. Cambridge: Wood Head Publishing, 2001

Pepper, David. *Modern Environmentalism An Introduction*. London: Routledge, 1996

Perlin, John. *A Forest Journey: The Role of Wood in the Development of Civilization*. Cambridge: Harvard University Press, 1989

Pojman, Louis P.. "Nature Has Intrinsic Value: Biocentric and Ecocentric Ethics and Deep Ecology". In *Environmental Ethics Readings in Theory and Application*, ed. Louis P. Pojman. Boston: Jones and Bartlett Publishers, 1994

Pojman, Louis P.. "Population: General Consideration". In *Environmental ethics: reading in theory and application*, ed. Louis P. Pojman. Boston: Jones and Bartlett Publishers, 1994

al-Qaradhāwī, Yusuf . *Riā`yah al-Bī'ah fi Sharī`ah al-Islām*. Cairo: Dār al-Shurūq, 2001

al-Qaradhāwī, Yusuf. *al-Īmān wa al-Hayah*. trans. by H. S. Fachriddin. Kuala Lumpur: Dewan Pustaka Fajar, 1985

al-Qaradhāwī, Yusuf. *Madkhal li Dirāsah al-Sharī`ah al-Islāmiyyah*. Cairo: Maktabah Wahbah, 2001

Rahim, Abdur. *The Principles of Islamic Jurisprudence*. New Delhi: Kitab Bhavan, 2006

Raphael, D. D.. *Moral Philosophy*. Oxford: Oxford University Press, 1994

Rayfuse, R., and M Wilder. "Sustainability, Uncertainty and Global Fisheries". In *Ecology, Uncertainty and Policy: Managing Ecosystem for Sustainability*, ed. J. W. Handmer, T. W. Norton and S. R. Dovers. Harlow: Pearson Education, 2001

Reese, William L.. *Dictionary of Philosophy and Religion Eastern and Western Thought*. New Jersey: Humanities Press and Harvester Press, 1980

Reinhart, A. Kevin. "Islamic Laws as Islamic ethics". *Journal of Religious Ethics*. Vol. 11, No. 2, Fall (1983): 186 - 203

"Rio Declaration on Environment and Development 1992". In *Environmental Ethics: Readings in Theory and Application*, ed. Louis P. Pojman. Boston: Jones and Bartlett Publishers, 1994

Roberts, Jane Susan. *Environmental Policy*. London; Routledge, 2004

Rolston III, Holmes. "Feeding People Versus Saving Nature". In *Environmental Ethics: an Anthology*, ed. Andrew Light and Holmes Rolston III. Malden: Blackwell Publishing, 2003

Ross, W. David. *Foundation of Ethics*. Oxford: Clarendon Press, 1969

Routley, Richard. "Is There a Need for a New, an Environmental Ethic?", *Proceedings of the XV World Congress of Philosophy*. Vol. 1 (1973): 205 – 210

Rudestam, Kjell Erik and Rae R. Newton. *Surviving Your Dissertation A Comprehensive Guide to Content and Process*. London: SAGE Punlications, 1992

Runes, Dagobert D.. *Dictionary of Philosophy*. New Jersey: Littlefield, Adam and Co., 1981

Sait, Siraj, and Hilary Lim. *Land, Law and Property: Property and Human Right in the Muslim World*. London: Zed Books, 2006

Sale, Mohammed A. Eben. "A Transformation of Vernacular Landscape of Highlands of South-Western Saudi Arabia", *International Journal of Environmental Studies*, Vol. 59, Issue 1 (2002): 33 –68

Salleh, Hassan. *al-Qawā`id al-Fiqhiyah*. Kota Bharu: Pustaka Aman Press, 1984

Salleh, M. N.. "Sustainability: The Panacea for Our Forest Ills?". In *Sustainable Forests: Global Challenges and Local Solutions*, ed. O. Thomas Bouman and David George Brand. New York: Food Products Press, 1997

al-Ṣan`ānī, Muhammad bin Ismā`īl. *Subul al-Salām Sharḥ Bulūgh al-Marām*. Beirut: Dār al-Ma`rifah, 2007

Sandler, Ronald L.. *Character and Environment A Virtue-Oriented Approach to Environmental Ethics*. New York: Columbia University Press, 2007

Sardar, Ziauddin ed.. *Touch of Midas: Science, Values and the Environment in Islam and the West*. Manchester: Manchester University Press, 1984

al-Sāyih, Ahmad `Abd al-Rahīm, and `Aishah Yusuf al-Manā`ī. *Dirāsāt fi al-Taṣawwuf wa al- Akhlāq*. Doha: Dar al-Thaqāfah, 1991

Schere, Donald and Thomas Attig. *Ethics and the Environment*. New Jersey: Prentice Hall Inc., 1983

Schidheiny, S.. *Changing Course: A Global Business Perspective on Development and Environment*. London: MIT Press, 1992

Seth, James. *A Study of Ethical Principles*, 11th Edition. Edinburgh and London: William Blackwood and Sons, 1909

al-Shāfi`ī, Muhammad bin Idris. *al-Risālah*, ed. Ahmad Muhammad Shakir. Beirut: al-Maktabah al-`Ilmiyyah, 1939

al-Shāfi`ī, Muhammad bin Idrīs. *al-Umm*. Beirut: Dār al-Kutub al-`Ilmiah, 2002

al-Shahrasatāni, Abī al-Fatḥ Muhammad Bin `Abd al-Karīm. *al-Milal wa al-Nihal*. Beirut: Dar al-Ma`rifah, 2001

al-Sharqāwī, Muhammad `Abd Allah. *al-Fikr al-Akḥlāqī Dīrāsah Muqāranah*. Beirut: Dar al-Jīl, 1990

al-Shātibī, Abū Ishāq Ibrāhīm. *al-Muwāfaqāt fi Uṣūl al-Ahkām*. Cairo: Dar al-Fikr, no date

al-Shawkānī, Muhammad bin `Alī. *Nayl al-Awṭar*. Cairo: Dār al-Ḥadīth, 1998

Sherif, Mohamed Ahmed. *Ghazali's Theory of Virtue*. Albany: State University of New York Press, 1975

Sing, C. Chew. *World Ecological Degradation.* Walnut Creek: Alta Mira Press, 2001

Singer, Peter. *Writings on the Ethical Life*. London: Fourth Estate, 2002

Singer, Peter. *One World: the Ethics of Globalization*, 2nd Edition. New Haven: Yale University Press, 2004.

Smith, P. M., and K. Warr ed.. *Global Environmental Issues*. London: Hodder and Stoughton, 1991

Somani, L. L.. *Dictionary of Ecology and Environment,* Vol. 3 (New Delhi: Mittal Publications, 1992)

Sterling, S. R.. "Culture, Ethics and the Environment: Towards the New Synthesis", *The Environmentalist*, 5 (1985): 197 - 206

Sterling, S. R.. "Rethinking Resource". In *The Environment in Question, Ethics and Global Issues*, ed. D. E. Cooper and J. A. Palmer. London: Routledge, 1992

Subḥī, Ahmad Maḥmūd. *al-Falsafah al-Akhlāqiyah fi al-Fikr al-Islamī.* Beirut: Dar al-Nahḍah al-`Arabiyah, 1992

Sutton, Philip W.. *The Environment: A sociological Introduction.* Cambridge: Polity Press, 2007

Taylor, Bron. "Religion and Environmentalism in America and Beyond". In *The Oxford Handbook Book for Religion and Ecology*, ed. Roger S. Gottlieb. Oxford: Oxford University Press, 2006.

Taylor, Paul. "Biocentric Egalitarianism". In *Environmental Ethics: Reading in Theory and Application*, ed. Louis P. Pojman. Boston: Jones and Bartlett Publishers, 1994

The World Bank. *Advancing Sustainable Development: The World Bank and Agenda 21.* New York: The World Bank, 1997

The World Commission on Environment and Development (WCED). *Our Common Future*. Oxford and New York: Oxford University Press, 1987

Thomas, David S. G., and Nicholas J. Middleton. *Desertification: Exploding the Myth.* Chichester: John Wiley & Sons ltd., 1994

Titus, H. H.. *Ethics for Today*, 3rd Edition. New York: American Book Company, 1957

Ujang, Zaini. "Islam dan Alam Sekitar". In *Islam dan Alam Sekitar*. ed. Zaini Ujang. Kuala Lumpur: Institut Kajian Dasar, 1993

Ujang, Zaini. *Environmentalisme Dalam Tata Baru Dunia*. Kuala Lumpur: IKD, 1992

Umaruddin, M.. *The Ethical Philosophy of al-Ghazzali*. Delhi: Adam Publisher and Distributors, 1962

Urmson, James O., and Johnathan Ree eds.. *The Concise Encyclopaedia of Western Philosophy and Philosophers*, 3rd Edition, London: Routledge, 1991

Van Latesteijn, Henk, and Jan Schoonenboom. "Policy Scenarios for Sustainable Development". In *Environmental Policy in an International Context*, ed. Andrew Blowers and Pieter Glasbergen. London: Arnold, 1996

Wai-Chung Lai, Lawrence, and Frank T. Lome. "Implementing Sustainable Development: Institutional Features". In *Understanding and Implementing Sustainable Development*, ed. Lawrence Wai-Chung Lai and Frank T. Lome. New York: Nova Science, 2003

Walde, Thomas W.. "Natural Resources and Sustainable Development: From Good Intentions to Good Consequences". In *International Law and Sustainable Development: Principles and Practice*, ed. Nico Schrijver and Friedl Weiss. Leiden: Martinus Nijhof, 2004

Webster's New World Dictionary, 2nd Edition Ohio: William Collins and World Publishing, 1976

Wersal, Lisa. "Islam and Environmental Ethics: Tradition Responds to Contemporary Challenges". *Zygon*. Vol. 30, No. 3 (September, 1995): 451 - 459

Westra, Laura. *An Environmental Ethics: Proposal for Ethics*. Lanham: Rowman and Littlefield Publishers, 1994

White, Lynn Jr.. "The Historical Roots of Our Ecological Crisis". *Science 155*, whole no. 3767, March 10 (1967): 1203 - 1212.

White, T. I.. *Right and Wrong: A Brief Guide to Understanding Ethics*. New Jersey: Prentice Hall, 1988

Wolf, E. C.. "Cegah Pemupusan Spesis yang Berleluasa". In *Dunia Terancam*, ed. Lester R. Brown. et.al.. Kuala Lumpur: INSAN, 1990

Wolman, Benjamin B.. *Dictionary of Behavioural Science.* New York: Van Nostrand Reinhold Company, 1973

Yaacub, Md. Akhir. *Undang-undang Islam dan Kewajipan Melaksanakannya.* Kelantan: Pustaka Reka, 1997

Yahya, Mukhtar and Fatchurrahman. *Dasar-dasar Pembinaan Hukum Islami.* Bandung: Penerbit al-Maa'rif, 1986

Young, Anthony. *Land Resources: Now and for the Future.* Cambridge: Cambridge University Press, 200

Zaydān, `Abd al-Karīm. *al-Madkhal li Dirāsah al-Sharī`ah al-Islāmiyyah.* Beirut: Mu'asasah al-Risalah, 2003

Zaydan, `Abd al-Karīm. *al-Wajīz fi Uṣūl al-Fiqh.* Beirut: Mu'assasah al-Risālah Nāshirūn, 2006

al-Zayla`ī, Jamāl al-Dīn. *Nasb al-Rāyah li Aḥādīth al-Hidāyah.* Cairo: Dār al-Ḥadīth, 1995

Zeyl, Donald J. ed.. *Encyclopedia of Classical Philosophy.* London: Fitzroy Dearborn Publishers, 1997

Ziman, John M.. *An Introduction to Sciences Studies: The Philosophical and Social Aspects of Science and Technology.* Cambridge: Cambridge University Press, 1987

al-Zuḥaylī, Wahbah. *al-Fiqh al-Islāmī wa Adilatuhu.* Damascus: Dār al-Fikr, 2007

Glossary of Arabic Terms

al-`Ādah	Custom
al-Afrāḥ	Happiness
al-Aḥkam al-Bī'ah	Environmental regulations
Ahl al-Ra'yi	Jurists who uphold the use of reasoning
Ahl al-Ḥadīth	Scholars who expert in sciences of narrations
Akhlāq	Islamic ethics
Amānah	Trustee of Allah the Almighty, Faithfulness
al-`Aml	Action
al-amru bi al-ma`ruf	Commanding right, promoting good
al-Nahyu `an al-munkar	Forbidding wrong, preventing bad
Arkān al-Islām	The five pillars of Muslim duties
al-Birr	Piety, Goodness
Ḥajiyyāt	Complementary needs
Ḍa`īf	Weak
Dalīl Qati`ī	Definitive proof
Dalīl Ẓannī	Non-definitive proof
Dalla al-Shāri`	Guide of the Lawgiver (Allah)
Ḍaruriyyāt	Essential needs
al-Dīn	True religion
al-Khayr	Good, fair
Fard al-`Ayn	Individual Duty
Fard al-Kifāyah	Communal Duty
Fasād (pl. *Mafāsid*)	Harm, destruction
Fatwā (pl. *Fatāwā*)	Formal legal opinion

Fiqh	Islamic Jurisprudence
al-Hadīth (pl. *Aḥādith*)	Narration from the Prophet
al-Ḥākim	The Lawgiver (Allah)
Ḥannān	Kindness
Ḥarām	Forbidden
Ḥarīm	Forbidden / inviolate zones
Ḥasan	Good
Hijrah	Islamic calendar based on the migration of the Prophet
Ḥimā	Protected / reserved zones
Ḥisbah	Islamic system and institution for commanding right and forbidding wrong
al-Ḥukm	Rule
al-Ḥukm al-Taklifi	Obligation rule
al-Ḥukm al-Waḍ`ī	Conditional rule.
al-ḥukm al-Shar`ī* (pl. *al-Aḥkām al-Shar`iyyah)	Divine rules
`Ibādah	Worship or service to God
Iḥkām	Preciseness
Iḥsān	Perfect piety, perform an action in a perfect manner
Ijtihād	The effort of a jurist makes in order to deduce the law
`Illah	Effective cause
`Ilm al-Akhlāq	Science of morals
`Ilm al-Kalām	The Science of Philosophical Theology
Ijmā`	Consensus
Ikrām	Respect
Ishfāq	Compassion

al-Istiṣḥāb	Presumption of continuity
al-Ithm	Sin, Wrong Action
Itqān	Neatness
Jamāl	Beauty
Jumhur	Majority of jurists
Kalām	Philosophical Theology
Khalīfah	Vicegerent (of Allah the Almighty), Deputy
al-khāliq	The Creator
Khiṭāb	Messages from the Lawgiver
Kitāb al-Manẓūr	Visible evidence refers to the universe
Kitāb al-Masṭūr	Readable evidence refers to Holy Book
Kufr al-Ni`mah	Ungrateful to Allah for what He has given
al-Kutub al-Mu'tabarah	Prominent authentic books
al-Ladhdhāt	Pleasure
al-Ma`rūf	Right, good
Ma'ālāt al-Af`al	Result of conducts
Madhhab (Madhāhib)	School of thought, school of law
Maḥabbah	Love.
al-Maḥkūm `Alayh	The person to whom the *Ḥukm* is addressed
al-Maḥkūm Fīh	The subject matter of *Ḥukm*
Makrūh	Reprehensible
Māni	Hindrance
Mandūb	Desired
Maqāṣid al-Sharī`ah	The purposes of Islamic laws
Maṣlaḥah (*Maṣāliḥ*)	Public Interest

al-Maṣlaḥah al-`Āmmah	General public interest
al-Maṣlaḥah al-Mu`tabarah	The public interest that is recognised by the divine texts
al-Maṣlaḥah al-Mulghah	The public interest that is rejected by the divine texts
al-Maṣlaḥah al-Mursalah	The public interest that is not found in the divine texts
Mīzān	Symmetry, balance
Mu'allaf	The people whose hearts need to be reconciled
Mubāh	Permissible
Mukallaf	Obligated persons
al-Munkar	Wrong, bad
Nasīm	Flourish
Ni`am	Bounties
Qabīh	Evil
Qawā`id al-Fiqhiyyah	Islamic legal maxim
al-Qawl	Word
al-Qur'ān	Holy Book of Islam
Qanā`ah	Contentedness
Qiyās	Legal analogy
Sabab	Cause
Sadd al-Dharā`I	Closing off the means to evil
Sahābah	The Prophet's companions
Saḥīḥ	Authentic
Sayyi'ah	Bad values
al-Ṣalāḥ	Good, fair
Sharī`ah	Islamic laws
al-Sharr	Bad, sin

Sharṭ	Condition
Shukr	Thankfulness
al-Sunnah	Narrations from the Prophet
Sūrah	Chapter of *al-Qur'ān*
Taḥsiniyyāt	Embellishment needs
Taqwa	Consciousness of God the Almighty
Tark (pl. *Turūk*)	Behaviour
Taṣawwuf	Sufism
Tawāzun	Equilibrium
Tawḥīd	Doctrine of oneness of God
Ṭayyibah	Good values
Tazkiyah al-Nafs	Self purification, psycho-spiritual activities
`Ubudiyyah	Service to Allah the Almighty
al-`Urf	Custom
al-`Urf al-Fāsid	Invalid custom
al-`Urf al-Saḥīḥ	Valid custom
Uṣūl al-Fiqh	Principles of Islamic jurisprudence
Waqf	Endowment
Wājib	Obligatory
Zīnah	Adornment

Appendix 1

THE EARTH CHARTER

PREAMBLE

We stand at a critical moment in Earth's history, a time when humanity must choose its future. As the world becomes increasingly interdependent and fragile, the future at once holds great peril and great promise. To move forward we must recognize that in the midst of a magnificent diversity of cultures and life forms we are one human family and one Earth community with a common destiny. We must join together to bring forth a sustainable global society founded on respect for nature, universal human rights, economic justice, and a culture of peace. Towards this end, it is imperative that we, the peoples of Earth, declare our responsibility to one another, to the greater community of life, and to future generations.

Earth, Our Home

Humanity is part of a vast evolving universe. Earth, our home, is alive with a unique community of life. The forces of nature make existence a demanding and uncertain adventure, but Earth has provided the conditions essential to life's evolution. The resilience of the community of life and the well-being of humanity depend upon preserving a healthy biosphere with all its ecological systems, a rich variety of plants and animals, fertile soils, pure waters, and clean air. The global environment with its finite resources is a common concern of all peoples. The protection of Earth's vitality, diversity, and beauty is a sacred trust.

The Global Situation

The dominant patterns of production and consumption are causing environmental devastation, the depletion of resources, and a massive extinction of species. Communities are being undermined. The benefits of development are not shared equitably and the gap between rich and poor is widening. Injustice, poverty, ignorance, and violent conflict are widespread and the cause of great suffering. An unprecedented rise in human population has overburdened ecological and social systems. The foundations of global security are threatened. These trends are perilous—but not inevitable.

The Challenges Ahead

The choice is ours: form a global partnership to care for Earth and one another or risk the destruction of ourselves and the diversity of life. Fundamental changes are needed in our values, institutions, and ways of living. We must realize that when basic needs have been met, human development is primarily about being more, not having more. We have the knowledge and technology to provide for all and to reduce our impacts on the environment. The emergence of a global civil society is creating new opportunities to build a democratic and humane world. Our environmental, economic, political, social, and spiritual challenges are interconnected, and together we can forge inclusive solutions.

Universal Responsibility

To realize these aspirations, we must decide to live with a sense of universal responsibility, identifying ourselves with the whole Earth community as well as our local communities. We are at once citizens of different nations and of one world in which the local and global are linked. Everyone shares responsibility for the present and future well-being of the human family and the larger living world. The spirit of human solidarity and kinship with all life is strengthened when we live with reverence for the mystery of being, gratitude for the gift of life, and humility regarding the human place in nature.

We urgently need a shared vision of basic values to provide an ethical foundation for the emerging world community. Therefore, together in hope we affirm the following interdependent principles for a sustainable way of life as a common standard by which the conduct of all individuals, organizations, businesses, governments, and transnational institutions is to be guided and assessed.

Appendix 1

THE EARTH CHARTER

PRINCIPLES

I. RESPECT AND CARE FOR THE COMMUNITY OF LIFE

1. Respect Earth and life in all its diversity.
a. Recognize that all beings are interdependent and every form of life has value regardless of its worth to human beings.
b. Affirm faith in the inherent dignity of all human beings and in the intellectual, artistic, ethical, and spiritual potential of humanity.

2. Care for the community of life with understanding, compassion, and love.
a. Accept that with the right to own, manage, and use natural resources comes the duty to prevent environmental harm and to protect the rights of people.
b. Affirm that with increased freedom, knowledge, and power comes increased responsibility to promote the common good.

3. Build democratic societies that are just, participatory, sustainable, and peaceful.
a. Ensure that communities at all levels guarantee human rights and fundamental freedoms and provide everyone an opportunity to realize his or her full potential.
b. Promote social and economic justice, enabling all to achieve a secure and meaningful livelihood that is ecologically responsible.

4. Secure Earth's bounty and beauty for present and future generations.
a. Recognize that the freedom of action of each generation is qualified by the needs of future generations.
b. Transmit to future generations values, traditions, and institutions that support the long-term flourishing of Earth's human and ecological communities. In order to fulfill these four broad commitments, it is necessary to:

II. ECOLOGICAL INTEGRITY

5. Protect and restore the integrity of Earth's ecological systems, with special concern for biological diversity and the natural processes that sustain life.
a. Adopt at all levels sustainable development plans and regulations that make environmental conservation and rehabilitation integral to all development initiatives.
b. Establish and safeguard viable nature and biosphere reserves, including wild lands and marine areas, to protect Earth's life support systems, maintain biodiversity, and preserve our natural heritage.
c. Promote the recovery of endangered species and ecosystems.
d. Control and eradicate non-native or genetically modified organisms harmful to native species and the environment, and prevent introduction of such harmful organisms.
e. Manage the use of renewable resources such as water, soil, forest products, and marine life in ways that do not exceed rates of regeneration and that protect the health of ecosystems.
f. Manage the extraction and use of non-renewable resources such as minerals and fossil fuels in ways that minimize depletion and cause no serious environmental damage.

6. Prevent harm as the best method of environmental protection and, when knowledge is limited, apply a precautionary approach.
a. Take action to avoid the possibility of serious or irreversible environmental harm even when scientific knowledge is incomplete or inconclusive.
b. Place the burden of proof on those who argue that a proposed activity will not cause significant harm, and make the responsible parties liable for environmental harm.
c. Ensure that decision making addresses the cumulative, long-term, indirect, long distance, and global consequences of human activities.
d. Prevent pollution of any part of the environment and allow no build-up of radioactive, toxic, or other hazardous substances.
e. Avoid military activities damaging to the environment.

7. Adopt patterns of production, consumption, and reproduction that safeguard Earth's regenerative capacities, human rights, and community well-being.
a. Reduce, reuse, and recycle the materials used in production and consumption systems, and ensure that residual waste can be assimilated by ecological systems.
b. Act with restraint and efficiency when using energy, and rely increasingly on renewable energy sources such as solar and wind.
c. Promote the development, adoption, and equitable transfer of environmentally sound technologies.

d. Internalize the full environmental and social costs of goods and services in the selling price, and enable consumers to identify products that meet the highest social and environmental standards.
e. Ensure universal access to health care that fosters reproductive health and responsible reproduction.
f. Adopt lifestyles that emphasize the quality of life and material sufficiency in a finite world.

8. Advance the study of ecological sustainability and promote the open exchange and wide application of the knowledge acquired.
a. Support international scientific and technical cooperation on sustainability, with special attention to the needs of developing nations.
b. Recognize and preserve the traditional knowledge and spiritual wisdom in all cultures that contribute to environmental protection and human well-being.
c. Ensure that information of vital importance to human health and environmental protection, including genetic information, remains available in the public domain.

III. SOCIAL AND ECONOMIC JUSTICE

9. Eradicate poverty as an ethical, social, and environmental imperative.
a. Guarantee the right to potable water, clean air, food security, uncontaminated soil, shelter, and safe sanitation, allocating the national and international resources required.
b. Empower every human being with the education and resources to secure a sustainable livelihood, and provide social security and safety nets for those who are unable to support themselves.
c. Recognize the ignored, protect the vulnerable, serve those who suffer, and enable them to develop their capacities and to pursue their aspirations.

10. Ensure that economic activities and institutions at all levels promote human development in an equitable and sustainable manner.
a. Promote the equitable distribution of wealth within nations and among nations.
b. Enhance the intellectual, financial, technical, and social resources of developing nations, and relieve them of onerous international debt.
c. Ensure that all trade supports sustainable resource use, environmental protection, and progressive labor standards.
d. Require multinational corporations and international financial organizations to act transparently in the public good, and hold them accountable for the consequences of their activities.

11. Affirm gender equality and equity as prerequisites to sustainable development and ensure universal access to education, health care, and economic opportunity.
a. Secure the human rights of women and girls and end all violence against them.
b. Promote the active participation of women in all aspects of economic, political, civil, social, and cultural life as full and equal partners, decision makers, leaders, and beneficiaries.
c. Strengthen families and ensure the safety and loving nurture of all family members.

12. Uphold the right of all, without discrimination, to a natural and social environment supportive of human dignity, bodily health, and spiritual well-being, with special attention to the rights of indigenous peoples and minorities.
a. Eliminate discrimination in all its forms, such as that based on race, color, sex, sexual orientation, religion, language, and national, ethnic or social origin.
b. Affirm the right of indigenous peoples to their spirituality, knowledge, lands and resources and to their related practice of sustainable livelihoods.
c. Honor and support the young people of our communities, enabling them to fulfill their essential role in creating sustainable societies.
d. Protect and restore outstanding places of cultural and spiritual significance.

IV. DEMOCRACY, NONVIOLENCE, AND PEACE

13. Strengthen democratic institutions at all levels, and provide transparency and accountability in governance, inclusive participation in decision making, and access to justice.
a. Uphold the right of everyone to receive clear and timely information on environmental matters and all development plans and activities which are likely to affect them or in which they have an interest.
b. Support local, regional and global civil society, and promote the meaningful participation of all interested individuals and organizations in decision making.
c. Protect the rights to freedom of opinion, expression, peaceful assembly, association, and dissent.
d. Institute effective and efficient access to administrative and independent judicial procedures, including remedies

and redress for environmental harm and the threat of such harm.
e. Eliminate corruption in all public and private institutions.
f. Strengthen local communities, enabling them to care for their environments, and assign environmental responsibilities to the levels of government where they can be carried out most effectively.

14. Integrate into formal education and life-long learning the knowledge, values, and skills needed for a sustainable way of life.
a. Provide all, especially children and youth, with educational opportunities that empower them to contribute actively to sustainable development.
b. Promote the contribution of the arts and humanities as well as the sciences in sustainability education.
c. Enhance the role of the mass media in raising awareness of ecological and social challenges.
d. Recognize the importance of moral and spiritual education for sustainable living.

15. Treat all living beings with respect and consideration.
a. Prevent cruelty to animals kept in human societies and protect them from suffering.
b. Protect wild animals from methods of hunting, trapping, and fishing that cause extreme, prolonged, or avoidable suffering.
c. Avoid or eliminate to the full extent possible the taking or destruction of non-targeted species.

16. Promote a culture of tolerance, nonviolence, and peace.
a. Encourage and support mutual understanding, solidarity, and cooperation among all peoples and within and among nations.
b. Implement comprehensive strategies to prevent violent conflict and use collaborative problem solving to manage and resolve environmental conflicts and other disputes.
c. Demilitarize national security systems to the level of a non-provocative defense posture, and convert military resources to peaceful purposes, including ecological restoration.
d. Eliminate nuclear, biological, and toxic weapons and other weapons of mass destruction.
e. Ensure that the use of orbital and outer space supports environmental protection and peace.
f. Recognize that peace is the wholeness created by right relationships with oneself, other persons, other cultures, other life, Earth, and the larger whole of which all are a part.

THE WAY FORWARD

As never before in history, common destiny beckons us to seek a new beginning. Such renewal is the promise of these Earth Charter principles. To fulfill this promise, we must commit ourselves to adopt and promote the values and objectives of the Charter.

This requires a change of mind and heart. It requires a new sense of global interdependence and universal responsibility. We must imaginatively develop and apply the vision of a sustainable way of life locally, nationally, regionally, and globally. Our cultural diversity is a precious heritage and different cultures will find their own distinctive ways to realize the vision. We must deepen and expand the global dialogue that generated the Earth Charter, for we have much to learn from the ongoing collaborative search for truth and wisdom.

Life often involves tensions between important values. This can mean difficult choices. However, we must find ways to harmonize diversity with unity, the exercise of freedom with the common good, short-term objectives with long-term goals. Every individual, family, organization, and community has a vital role to play. The arts, sciences, religions, educational institutions, media, businesses, nongovernmental organizations, and governments are all called to offer creative leadership. The partnership of government, civil society, and business is essential for effective governance.

In order to build a sustainable global community, the nations of the world must renew their commitment to the United Nations, fulfill their obligations under existing international agreements, and support the implementation of Earth Charter principles with an international legally binding instrument on environment and development.

Let ours be a time remembered for the awakening of a new reverence for life, the firm resolve to achieve sustainability, the quickening of the struggle for justice and peace, and the joyful celebration of life.

ORIGIN OF THE EARTH CHARTER
The Earth Charter was created by the independent Earth Charter Commission, which was convened as a follow-up to the 1992 Earth Summit in order to produce a global consensus statement of values and principles for a sustainable future. The document was developed over nearly a decade through an extensive process of international consultation, to which over five thousand people contributed. The Charter has been formally endorsed by thousands of organizations, including UNESCO and the IUCN (World Conservation Union). For more information, please visit www.EarthCharter.org.

Appendix 2

United Nations A/RES/37/7

General Assembly

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A/RES/37/7
48th plenary meeting
28 October 1982

37/7. World Charter for Nature

The General Assembly,

Having considered the report of the Secretary-General on the revised draft World Charter for Nature,

Recalling that, in its resolution 35/7 of 30 October 1980, it expressed its conviction that the benefits which could be obtained from nature depended on the maintenance of natural processes and on the diversity of life forms and that those benefits were jeopardized by the excessive exploitation and the destruction of natural habitats,

Further recalling that, in the same resolution, it recognized the need for appropriate measures at the national and international levels to protect nature and promote international co-operation in that field,

Recalling that, in its resolution 36/6 of 27 October 1981, it again expressed its awareness of the crucial importance attached by the international community to the promotion and development of co-operation aimed at protecting and safeguarding the balance and quality of nature and invited the Secretary-General to transmit to Member States the text of the revised version of the draft World Charter for Nature contained in the report of the Ad Hoc Group of Experts on the draft World Charter for Nature, as well as any further observations by States, with a view to appropriate consideration by the General Assembly at its thirty-seventh session,

Conscious of the spirit and terms of its resolutions 35/7 and 36/6, in which it solemnly invited Member States, in the exercise of their permanent sovereignty over their natural resources, to conduct their activities in recognition of the supreme importance of protecting natural systems, maintaining the balance and quality of nature and conserving natural resources, in the interests of present and future generations,

Having considered the supplementary report of the Secretary-General,

Expressing its gratitude to the Ad Hoc Group of Experts which, through its work, has assembled the necessary elements for the General Assembly to be able to complete the consideration of and adopt the revised draft World Charter for Nature at its thirty-seventh session, as it had previously recommended,

Adopts and solemnly proclaims the World Charter for Nature contained in the annex to the present resolution.

ANNEX

World Charter for Nature

The General Assembly,

Reaffirming the fundamental purposes of the United Nations, in particular the maintenance of international peace and security, the development of friendly relations among nations and the achievement of international co-operation in solving international problems of an economic, social, cultural, technical, intellectual or humanitarian character,

Aware that:

(a) Mankind is a part of nature and life depends on the uninterrupted functioning of natural systems which ensure the supply of energy and nutrients,

(b) Civilization is rooted in nature, which has shaped human culture and influenced all artistic and scientific achievement, and living in harmony with nature gives man the best opportunities for the development of his creativity, and for rest and recreation,

Convinced that:

(a) Every form of life is unique, warranting respect regardless of its worth to man, and, to accord other organisms such recognition, man must be guided by a moral code of action,

(b) Man can alter nature and exhaust natural resources by his action or its consequences and, therefore, must fully recognize the urgency of maintaining the stability and quality of nature and of conserving natural resources,

Persuaded that:

(a) Lasting benefits from nature depend upon the maintenance of essential ecological processes and life support systems, and upon the diversity of life forms, which are jeopardized through excessive exploitation and habitat destruction by man,

(b) The degradation of natural systems owing to excessive consumption and misuse of natural resources, as well as to failure to establish an appropriate economic order among peoples and among States, leads to the breakdown of the economic, social and political framework of civilization,

(c) Competition for scarce resources creates conflicts, whereas the conservation of nature and natural resources contributes to justice and the maintenance of peace and cannot be achieved until mankind learns to live in peace and to forsake war and armaments,

Reaffirming that man must acquire the knowledge to maintain and enhance his ability to use natural resources in a manner which ensures the preservation of the species and ecosystems for the benefit of present and future generations,

Firmly convinced of the need for appropriate measures, at the national and international, individual and collective, and private and public levels, to protect nature and promote international co-operation in this field,

Adopts, to these ends, the present World Charter for Nature, which proclaims the following principles of conservation by which all human conduct affecting nature is to be guided and judged.

I. GENERAL PRINCIPLES

1. Nature shall be respected and its essential processes shall not be impaired.

2. The genetic viability on the earth shall not be compromised; the population levels of all life forms, wild and domesticated, must be at least sufficient for their survival, and to this end necessary habitats shall be safeguarded.

3. All areas of the earth, both land and sea, shall be subject to these principles of conservation; special protection shall be given to unique areas, to representative samples of all the different types of ecosystems and to the habitats of rare or endangered species.

4. Ecosystems and organisms, as well as the land, marine and atmospheric resources that are utilized by man, shall be managed to achieve and maintain optimum sustainable productivity, but not in such a way as to endanger the integrity of those other ecosystems or species with which they coexist.

5. Nature shall be secured against degradation caused by warfare or other hostile activities.

II. FUNCTIONS

6. In the decision-making process it shall be recognized that man's needs can be met only by ensuring the proper functioning of natural systems and by respecting the principles set forth in the present Charter.

7. In the planning and implementation of social and economic development activities, due account shall be taken of the fact that the conservation of nature is an integral part of those activities.

8. In formulating long-term plans for economic development, population growth and the improvement of standards of living, due account shall be taken of the long-term capacity of natural systems to ensure the subsistence and settlement of the populations concerned, recognizing that this capacity may be enhanced through science and technology.

9. The allocation of areas of the earth to various uses shall be planned, and due account shall be taken of the physical constraints, the biological productivity and diversity and the natural beauty of the areas concerned.

10. Natural resources shall not be wasted, but used with a restraint appropriate to the principles set forth in the present Charter, in accordance with the following rules:

(a) Living resources shall not be utilized in excess of their natural capacity for regeneration;

(b) The productivity of soils shall be maintained or enhanced through measures which safeguard their long-term fertility and the process of organic decomposition, and prevent erosion and all other forms of degradation;

(c) Resources, including water, which are not consumed as they are used shall be reused or recycled;

(d) Non-renewable resources which are consumed as they are used shall be exploited with restraint, taking into account their abundance, the rational possibilities of converting them for consumption, and the compatibility of their exploitation with the functioning of natural systems.

11. Activities which might have an impact on nature shall be controlled, and the best available technologies that minimize significant risks to nature or other adverse effects shall be used; in particular:

(a) Activities which are likely to cause irreversible damage to nature shall be avoided;

(b) Activities which are likely to pose a significant risk to nature shall be preceded by an exhaustive examination; their proponents shall demonstrate that expected benefits outweigh potential damage to nature, and where potential adverse effects are not fully understood, the activities should not proceed;

(c) Activities which may disturb nature shall be preceded by assessment of their consequences, and environmental impact studies of development projects shall be conducted sufficiently in advance, and if they are to be undertaken, such activities shall be planned and carried out so as to minimize potential adverse effects;

(d) Agriculture, grazing, forestry and fisheries practices shall be adapted to the natural characteristics and constraints of given areas;

(e) Areas degraded by human activities shall be rehabilitated for purposes in accord with their natural potential and compatible with the well-being of affected populations.

12. Discharge of pollutants into natural systems shall be avoided and:

(a) Where this is not feasible, such pollutants shall be treated at the source, using the best practicable means available;

(b) Special precautions shall be taken to prevent discharge of radioactive or toxic wastes.

13. Measures intended to prevent, control or limit natural disasters, infestations and diseases shall be specifically directed to the causes of these scourges and shall avoid adverse side-effects on nature.

III. IMPLEMENTATION

14. The principles set forth in the present Charter shall be reflected in the law and practice of each State, as well as at the international level.

15. Knowledge of nature shall be broadly disseminated by all possible means, particularly by ecological education as an integral part of general education.

16. All planning shall include, among its essential elements, the formulation of strategies for the conservation of nature, the establishment of inventories of ecosystems and assessments of the effects on nature of proposed policies and activities; all of these elements shall be disclosed to the public by appropriate means in time to permit effective consultation and participation.

17. Funds, programmes and administrative structures necessary to achieve the objective of the conservation of nature shall be provided.

18. Constant efforts shall be made to increase knowledge of nature by scientific research and to disseminate such knowledge unimpeded by restrictions of any kind.

19. The status of natural processes, ecosystems and species shall be closely monitored to enable early detection of degradation or threat, ensure timely intervention and facilitate the evaluation of conservation policies and methods.

20. Military activities damaging to nature shall be avoided.

21. States and, to the extent they are able, other public authorities, international organizations, individuals, groups and corporations shall:

(a) Co-operate in the task of conserving nature through common activities and other relevant actions, including information exchange and consultations;

(b) Establish standards for products and manufacturing processes that may have adverse effects on nature, as well as agreed methodologies for assessing these effects;

(c) Implement the applicable international legal provisions for the conservation of nature and the protection of the environment;

(d) Ensure that activities within their jurisdictions or control do not cause damage to the natural systems located within other States or in the areas beyond the limits of national jurisdiction;

(e) Safeguard and conserve nature in areas beyond national jurisdiction.

22. Taking fully into account the sovereignty of States over their natural resources, each State shall give effect to the provisions of the present Charter through its competent organs and in co-operation with other States.

23. All persons, in accordance with their national legislation, shall have the opportunity to participate, individually or with others, in the formulation of decisions of direct concern to their environment, and shall have access to means of redress when their environment has suffered damage or degradation.

24. Each person has a duty to act in accordance with the provisions of the present Charter; acting individually, in association with others or through participation in the political process, each person shall strive to ensure that the objectives and requirements of the present Charter are met.

Appendix 3

General Framework of Islamic Agenda for Sustainable Development

* * * *

Based on the specialized studies examined by the First Islamic Conference of Environment Ministers held in Jeddah, which reviewed the major challenges faced by the Islamic world in the field of sustainable development, materialized mainly in the poverty, illiteracy, accumulation of foreign debts, degradation of economic and social conditions, disquilibrium between population growth and available natural resources, the weakness of technical capabilities, the lack of expertise and skills in environment management, along with the negative impacts left by regional conflicts, foreign occupation of parts of its land and despoiling of its resources, one may chart out the general framework of an Islamic agenda liable to help overcome these obstacles and lay down sturdy foundations for cooperation among the Islamic countries to achieve sustainable development, with a view to being submitted to the World Summit on Sustainable Development in Johannesburg.

The agenda revolves around the following axes which could be translated into field projects and activities, in cooperation with regional and international organizations :

I- Economic growth :

Achieving a level of economic growth enabling the Islamic countries to bridge the gap between them and developed countries by means of mobilizing the available energies, especially through :

1- Stimulation of investment in highly profitable sectors.

2- Capacity-building in the field of research and transfer of technologies in the following fields :

a) Supporting the capabilities of academic and research centers in the Islamic countries, especially with regard to programme development and promotion of priority research facilities.

b) Facilitating access to modern information and communication technologies which open new vistas for rationalization of Islamic countries' resources.

3) Achieving food security and promoting plant and animal resources in Islamic countries.

4) Supporting new partnership for economic development of African countries.

5) Developing control mechanisms to ensure flexible management of short-term capital influx, in compliance with the objectives of sustainable development in developing countries.

II- Poverty eradication :

As part of endeavour to eradicate poverty in the Islamic world, the following programmes should be particularly supported, namely :

1- Creating employment opportunities through encouragement of the establishment of small and medium-sized enterprises.
2- Initiating programmes for vocational training and technical education to step up efforts of literacy and eradication of poverty.
3- Promoting Islamic solidarity and mutual support.
4- Facilitating access to small, preferential loans to fund local development projects and raise the income of poor families, especially in the countryside and the remote areas.
5- Associating local community, and populations in general, in the identification of the needs and the drafting, implementation and evaluation of action programmes.

III- Population and urban development :

Elaborating an integrated population policy striking fair balance between population growth and population characteristics and redressing the imbalances between the towns and the countryside, by means of :

1- Drawing up and implementing strategies for countryside development focussing on the most disadvantaged areas.
2- Preparing Agenda 21 Programmes and implementing them at the local level.
3- Controlling indecent, random housing.
4- Developing the infrastructure of the periphery, promoting them and adopting suitable approaches for appropriate development of population agglomerations.

IV- Health and environment :

1- Supply of food and adequate potable water.
2- Treatment of sewage and hard wastes, and securing their safe recycling.
3- Controlling the potential risks resulting from all types of pollution.
4- Safe management of toxic, dangerous and radioactive wastes.
5- Controlling the use of chemicals.
6- Fighting propagation of epidemics and diseases and ensuring basic health care services as part of the initiative of health for all.
7- Generalizing assessment of environmental and health impacts of development projects.

V- Natural resources:

1- Water :

a) Harnessing available water resources, drawing up programmes for their rationalization and exploring new water potentials, including rainwater and non-conventional resources.

b) Developing desalination techniques and generalizing them to reduce production costs.

c) Enhancing the legal and technical aspects of water consumption rationalization.

d) Publicizing success stories in the fields of sanitation and safe processing and recycling of waste waters.

e) Setting up complementary projects among Muslim countries to help meet their needs in few years.

f) Securing fair management of natural and biological resources.

g) Adopting new measures to combat arsenic pollution of ground waters.

h) Adopting a common stand on water shares of lower river countries in international river waters.

2- Forests and biodiversity :

a) Setting up an Islamic center for exchange of information on biodiversity.

b) Taking out an inventory of all plant and animal species in the Islamic world.

c) Managing joint natural reserves shared by the Muslim countries.

d) Enforcing the laws on natural reserves and adapting them to fit the commitments of the Islamic countries under relevant international agreements.

e) Initiating local development projects benefitting to populations residing in the vicinity of forests, to encourage them to rationalize forest resources.

f) Supporting Islamic countries to prepare and implement national and sub-regional strategies and plans to preserve biodiversity and reduce desertification effects.

3- Combating desertification and alleviating drought effects :

a) Launching pilot projects on local development to reduce the effects of desertification.

b) Setting up a comprehensive strategy for identification of sites threatened by desertification in the Islamic countries.

c) Establishing joint geographical data bases and early-warning systems to monitor desertification.

d) Supporting Islamic countries to prepare and implement national and sub-regional strategies and plans to combat desertification and alleviate drought effects.

4- Energy and Climate Change:

a) Developing strategies for the cleanest and most suitable energy production systems fit for energy consumption.

b) Conducting a comprehensive survey on Islamic countries' capabilities in terms of harnessing solar, water and wind energy.

c) Establishing renewable energy projects in the Muslim world.

d) Conducting a study on impact of green house effect on Muslim countries, especially on the health.

5- Coasts and sea water:

a- Training manpower in emergency intervention in the event of sea pollution with hydrocarbons and chemicals.

b- Conducting a study on fragile coastal areas in Islamic coastal countries and ensuring their safety.

c- Developing plans to direct population concentration and economic activities to ward off adverse effects on fragile coastal areas.

d- Preventing evacuation of untreated sewage and liquid industrial wastes into sea waters.

VI- World Trade and Globalization :

1- Training enterprises in the Muslim world to improve their competitiveness and penetration of world markets and promoting trade exchange among Muslim countries.

2- Formulating a guide for Islamic countries to environment norms and quality standards to enhance the competitiveness and quality of Islamic countries' products.

3- Sustaining international efforts to reform the world financial system and make it more transparent just and comprehensiveness to help Muslim countries take an active part in the global commercial activity and face the challenges posed by globalization.

VII- Legal and Institutional Aspects of Environment :

1- Conducting a comparative study on Islamic countries' environmental laws and conferring an Islamic character on their contents.

2- Making Islamic countries' environmental laws consistent with their commitments under related international conventions.

3- Training human resources in environmental law enforcement.

4- Strengthening and supporting the legal framework of governmental institutions in charge of environment.

5- Creating environmental associations network to coordinate their activities and programmes.

6- Supporting local and regional non-governmental associations operating in the field of environment protection.

VIII- Involvement of civil society :

1- Encouraging involvement of the civil society in the elaboration and implementation of strategies and plans destined to sustainable development and environment protection.

2- Encouraging the establishment of civil society organizations and drawing up legislations promoting their participation.

IX- Awareness-raising, education and information programmes :

1- Incorporating the component of environment from an Islamic perspective in general education curricula.

2- Establishing coordination networks between Islamic countries' universities and governmental institutions to exchange experience in environment and sustainable development-related training and scientific research.

3- Exchanging radio and television programmes on environmental awareness in Islamic countries.

4- Holding training sessions for literacy personnel to incorporate the environmental component in literacy programmes.

5- Training media specialists in environmental awareness-raising.

6- Organizing media campaings to enhance population behaviour and attitude towards environment and health, capitalizing on Islamic teachings in this connection.

X- Achieving peace and security :

1- Developing programmes and plans to promote justice-based peace culture in the Muslim world, contributing thereby to the promotion of global peace.

2- Formulating programmes to highlight the importance of terminating foreign occupation and establishing peace and security in the sustainable development process.

3- Sustaining efforts to define terrorism and highlight its difference of resistance-fighting of foreign occupation as admitted by international rules, regulations and customs.

XI- Funding :

1- Developing environmental programmes likely to induce financing provided for in environment-related international conventions.

2- Benefiting from opportunities offered by Islamic financing institutions and the Islamic Environment Fund to carry out environment-oriented programmes in the Muslim world, including institutional support programmes and capacity-building of environment protection authorities.

3- Harnessing local financial resources with utmost rationalization and gearing them to specific priority objectives.

Appendix 4

United Nations

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REPORT OF THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT

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Annex III

NON-LEGALLY BINDING AUTHORITATIVE STATEMENT OF PRINCIPLES FOR A GLOBAL CONSENSUS ON THE MANAGEMENT, CONSERVATION AND SUSTAINABLE DEVELOPMENT OF ALL TYPES OF FORESTS

PREAMBLE

(a) The subject of forests is related to the entire range of environmental and development issues and opportunities, including the right to socio-economic development on a sustainable basis.

(b) The guiding objective of these principles is to contribute to the management, conservation and sustainable development of forests and to provide for their multiple and complementary functions and uses.

(c) Forestry issues and opportunities should be examined in a holistic and balanced manner within the overall context of environment and development, taking into consideration the multiple functions and uses of forests, including traditional uses, and the likely economic and social stress when these uses are constrained or restricted, as well as the potential for development that sustainable forest management can offer.

(d) These principles reflect a first global consensus on forests. In committing themselves to the prompt implementation of these principles, countries also decide to keep them under assessment for their adequacy with regard to further international cooperation on forest issues.

(e) These principles should apply to all types of forests, both natural and planted, in all geographical regions and climatic zones, including austral, boreal, subtemperate, temperate, subtropical and tropical.

(f) All types of forests embody complex and unique ecological processes which are the basis for their present and potential capacity to provide resources to satisfy human needs as well as environmental values, and as such their sound management and conservation is of concern to the Governments of the countries to which they belong and are of value to local communities and to the environment as a whole.

(g) Forests are essential to economic development and the maintenance of all forms of life.

(h) Recognizing that the responsibility for forest management, conservation and sustainable development is in many States allocated among federal/national, state/provincial and local levels of government, each State, in accordance with its constitution and/or national legislation, should pursue these principles at the appropriate level of government.

PRINCIPLES/ELEMENTS

1. (a) States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies and have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the

limits of national jurisdiction.

(b) The agreed full incremental cost of achieving benefits associated with forest conservation and sustainable development requires increased international cooperation and should be equitably shared by the international community.

2. (a) States have the sovereign and inalienable right to utilize, manage and develop their forests in accordance with their development needs and level of socio-economic development and on the basis of national policies consistent with sustainable development and legislation, including the conversion of such areas for other uses within the overall socio-economic development plan and based on rational land-use policies.

(b) Forest resources and forest lands should be sustainably managed to meet the social, economic, ecological, cultural and spiritual needs of present and future generations. These needs are for forest products and services, such as wood and wood products, water, food, fodder, medicine, fuel, shelter, employment, recreation, habitats for wildlife, landscape diversity, carbon sinks and reservoirs, and for other forest products. Appropriate measures should be taken to protect forests against harmful effects of pollution, including air-borne pollution, fires, pests and diseases, in order to maintain their full multiple value.

(c) The provision of timely, reliable and accurate information on forests and forest ecosystems is essential for public understanding and informed decision-making and should be ensured.

(d) Governments should promote and provide opportunities for the participation of interested parties, including local communities and indigenous people, industries, labour, non-governmental organizations and individuals, forest dwellers and women, in the development, implementation and planning of national forest policies.

3. (a) National policies and strategies should provide a framework for increased efforts, including the development and strengthening of institutions and programmes for the management, conservation and sustainable development of forests and forest lands.

(b) International institutional arrangements, building on those organizations and mechanisms already in existence, as appropriate, should facilitate international cooperation in the field of forests.

(c) All aspects of environmental protection and social and economic development as they relate to forests and forest lands should be integrated and comprehensive.

4. The vital role of all types of forests in maintaining the ecological processes and balance at the local, national, regional and global levels through, inter alia, their role in protecting fragile ecosystems, watersheds and freshwater resources and as rich storehouses of biodiversity and biological resources and sources of genetic material for biotechnology products, as well as photosynthesis, should be recognized.

5. (a) National forest policies should recognize and duly support the identity, culture and the rights of indigenous people, their communities and other communities and forest dwellers. Appropriate conditions should be promoted for these groups to enable them to have an economic stake in forest use, perform economic activities, and achieve and maintain cultural identity and social organization, as well as adequate levels of livelihood and well-being, through, inter alia, those land tenure arrangements which serve as incentives for the sustainable management of forests.

(b) The full participation of women in all aspects of the management, conservation and sustainable development of forests should be actively promoted.

6. (a) All types of forests play an important role in meeting energy requirements through the provision of a renewable source of bio-energy, particularly in developing countries, and the demands for fuelwood for household and industrial needs should be met through sustainable forest management, afforestation and reforestation. To this end, the potential contribution of plantations of both indigenous and introduced species for the provision of both fuel and industrial wood should be recognized.

(b) National policies and programmes should take into account the relationship, where it exists, between the conservation, management and sustainable development of forests and all aspects related to the production,

consumption, recycling and/or final disposal of forest products.

(c) Decisions taken on the management, conservation and sustainable development of forest resources should benefit, to the extent practicable, from a comprehensive assessment of economic and non-economic values of forest goods and services and of the environmental costs and benefits. The development and improvement of methodologies for such evaluations should be promoted.

(d) The role of planted forests and permanent agricultural crops as sustainable and environmentally sound sources of renewable energy and industrial raw material should be recognized, enhanced and promoted. Their contribution to the maintenance of ecological processes, to offsetting pressure on primary/old-growth forest and to providing regional employment and development with the adequate involvement of local inhabitants should be recognized and enhanced.

(e) Natural forests also constitute a source of goods and services, and their conservation, sustainable management and use should be promoted.

7. (a) Efforts should be made to promote a supportive international economic climate conducive to sustained and environmentally sound development of forests in all countries, which include, inter alia, the promotion of sustainable patterns of production and consumption, the eradication of poverty and the promotion of food security.

(b) Specific financial resources should be provided to developing countries with significant forest areas which establish programmes for the conservation of forests including protected natural forest areas. These resources should be directed notably to economic sectors which would stimulate economic and social substitution activities.

8. (a) Efforts should be undertaken towards the greening of the world. All countries, notably developed countries, should take positive and transparent action towards reforestation, afforestation and forest conservation, as appropriate.

(b) Efforts to maintain and increase forest cover and forest productivity should be undertaken in ecologically, economically and socially

sound ways through the rehabilitation, reforestation and re-establishment of trees and forests on unproductive, degraded and deforested lands, as well as through the management of existing forest resources.

(c) The implementation of national policies and programmes aimed at forest management, conservation and sustainable development, particularly in developing countries, should be supported by international financial and technical cooperation, including through the private sector, where appropriate.

(d) Sustainable forest management and use should be carried out in accordance with national development policies and priorities and on the basis of environmentally sound national guidelines. In the formulation of such guidelines, account should be taken, as appropriate and if applicable, of relevant internationally agreed methodologies and criteria.

(e) Forest management should be integrated with management of adjacent areas so as to maintain ecological balance and sustainable productivity.

(f) National policies and/or legislation aimed at management, conservation and sustainable development of forests should include the protection of ecologically viable representative or unique examples of forests, including primary/old-growth forests, cultural, spiritual, historical, religious and other unique and valued forests of national importance.

(g) Access to biological resources, including genetic material, shall be with due regard to the sovereign rights of the countries where the forests are located and to the sharing on mutually agreed terms of technology and profits from biotechnology products that are derived from these resources.

(h) National policies should ensure that environmental impact assessments should be carried out where actions are likely to have significant adverse impacts on important forest resources, and where such actions are subject to a decision of a competent national authority.

9. (a) The efforts of developing countries to strengthen the management, conservation and sustainable development of their forest resources should be supported by the international community, taking into account the importance

of redressing external indebtedness, particularly where aggravated by the net transfer of resources to developed countries, as well as the problem of achieving at least the replacement value of forests through improved market access for forest products, especially processed products. In this respect, special attention should also be given to the countries undergoing the process of transition to market economies.

(b) The problems that hinder efforts to attain the conservation and sustainable use of forest resources and that stem from the lack of alternative options available to local communities, in particular the urban poor and poor rural populations who are economically and socially dependent on forests and forest resources, should be addressed by Governments and the international community.

(c) National policy formulation with respect to all types of forests should take account of the pressures and demands imposed on forest ecosystems and resources from influencing factors outside the forest sector, and intersectoral means of dealing with these pressures and demands should be sought.

10. New and additional financial resources should be provided to developing countries to enable them to sustainably manage, conserve and develop their forest resources, including through afforestation, reforestation and combating deforestation and forest and land degradation.

11. In order to enable, in particular, developing countries to enhance their endogenous capacity and to better manage, conserve and develop their forest resources, the access to and transfer of environmentally sound technologies and corresponding know-how on favourable terms, including on concessional and preferential terms, as mutually agreed, in accordance with the relevant provisions of Agenda 21, should be promoted, facilitated and financed, as appropriate.

12. (a) Scientific research, forest inventories and assessments carried out by national institutions which take into account, where relevant, biological, physical, social and economic variables, as well as technological development and its application in the field of sustainable forest management, conservation and development, should be strengthened through effective modalities, including international cooperation. In this context, attention

should also be given to research and development of sustainably harvested non-wood products.

(b) National and, where appropriate, regional and international institutional capabilities in education, training, science, technology, economics, anthropology and social aspects of forests and forest management are essential to the conservation and sustainable development of forests and should be strengthened.

(c) International exchange of information on the results of forest and forest management research and development should be enhanced and broadened, as appropriate, making full use of education and training institutions, including those in the private sector.

(d) Appropriate indigenous capacity and local knowledge regarding the conservation and sustainable development of forests should, through institutional and financial support and in collaboration with the people in the local communities concerned, be recognized, respected, recorded, developed and, as appropriate, introduced in the implementation of programmes. Benefits arising from the utilization of indigenous knowledge should therefore be equitably shared with such people.

13. (a) Trade in forest products should be based on non-discriminatory and multilaterally agreed rules and procedures consistent with international trade law and practices. In this context, open and free international trade in forest products should be facilitated.

(b) Reduction or removal of tariff barriers and impediments to the provision of better market access and better prices for higher value-added forest products and their local processing should be encouraged to enable producer countries to better conserve and manage their renewable forest resources.

(c) Incorporation of environmental costs and benefits into market forces and mechanisms, in order to achieve forest conservation and sustainable development, should be encouraged both domestically and internationally.

(d) Forest conservation and sustainable development policies should be integrated with economic, trade and other relevant policies.

(e) Fiscal, trade, industrial, transportation and other policies and practices that may lead to forest degradation should be avoided. Adequate policies, aimed at management, conservation and sustainable development of forests, including, where appropriate, incentives, should be encouraged.

14. Unilateral measures, incompatible with international obligations or agreements, to restrict and/or ban international trade in timber or other forest products should be removed or avoided, in order to attain long-term sustainable forest management.

15. Pollutants, particularly air-borne pollutants, including those responsible for acidic deposition, that are harmful to the health of forest ecosystems at the local, national, regional and global levels should be controlled.

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