

## **TOWARDS AN ISLAMIC APPROACH FOR ENVIRONMENTAL BALANCE**

**MUHAMMAD RAMZAN AKHTAR\***

*The paper studies the Islamic viewpoint about the environment and presents the notion of environmental balance in an Islamic economy. It asserts that this balance can be maintained with the help of Islamic ethics and institutions. The paper demonstrates the positive role of the private sector in terms of environment-friendly behavior, fellow-feeling, and simple living of the people. Similarly, it discusses the legislature, monitoring and resource development roles of the Islamic state to protect the environment. The paper contends that its approach provides an appropriate analytical framework for the understanding of the environmental question.*

### **1. INTRODUCTION**

There is growing concern about the environmental problem throughout the world. In the West, a new discipline called 'Environmental Economics' has come into being to study the various dimensions of this problem. In the light of this discipline, various policy programs have been implemented both in the developed and developing countries. In spite of these efforts, the environmental problem has been aggravating.

The environmental economics has been unable to capture the essence of the problem mainly because of its limited vision. Therefore, its policy prescriptions have not properly worked. However, Islamic economics, with its broad and divine vision, can correctly diagnose the problem and suggest effective solution. It is in this context that the paper wants to make some contribution to Islamic economics on the issues of nature and solution of the environmental problem. For this purpose, it has developed an Islamic perspective to systematically examine these issues.

The paper is theoretical in nature. Basing its arguments on the Quran, *sunnah*, *fiqh* and Islamic history, the paper uses the logic of economic theory to explain its point of view.<sup>1</sup> The main thesis of the paper is that there exists environmental balance in the universe. The Islamic way of life and Islamic state make important contributions in maintaining this balance. The paper, therefore, argues that an Islamic

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\* Professor, School of Economics, International Institute of Islamic Economics, International Islamic University, Islamabad.

<sup>1</sup> In all references to the Quran in this paper, the first number refers to the *surah* (chapter) and the second to the *ayah* (verse).

economy equipped with these two institutions is less likely to face the environmental problem than a secular economy.

## 2. THE LITERATURE

### 2.1 Islamic Viewpoint

The Muslim economists have so far made relatively insignificant contribution to the subject of environment. Most of them have only discussed the moral aspect of the subject in general terms. In fact, there are very few studies which have approached the problem systematically. Even those few studies have not worked out the practical ways and means for ensuring environmental security.

Akbar<sup>2</sup> notes that technological progress is responsible for disturbing the equilibrium in nature. He says, "The present ecological crisis is an outward manifestation of a crisis of mind and spirit". He underlines the importance of changing beliefs and traditions so that human beings live responsibly with the rest of the creation. In this setting, he presents an Islamic viewpoint and then compares it with the Western viewpoint. While describing the roots of Islamic environmental ethics, he mentions the principles of unity, trusteeship, and accountability.

Chapra<sup>3</sup> traces the ethical foundations for the protection of environment under the principle of 'No Injury'. According to this principle, Muslims are prohibited from harming others. He contends that the environmental degradation harms both the present and future generations. Therefore, it is an obligation of an individual and a society to protect it.

Nasr<sup>4</sup> holds a similar viewpoint. He says that in Islam, man and cosmos are in a state of unity, harmony, and complementarity. He maintains that planting trees, treating animals gently, avoiding pollution in water are as good deeds as feeding the poor and attending the sick. Moreover, he emphasizes the spiritual significance of nature. For the solution of the environmental problem, he specifically suggests expansion of general awareness regarding *shari'ah's* teachings about the ethical treatment of the environment. He does not assign any role to the Islamic state for the promotion of the environment.

Husaini<sup>5</sup> provides valuable insight to the understanding of the problem. He believes that Islam is the natural religion of everyone in the universe. A Muslim grows by submitting himself to the will of Allah. The universe has been created as a necessary environment in which he might fulfill his mission. As a vicegerent of Allah on earth, man must recognize the right of all creatures to the environmental resources. He argues that the environmental disruption of any kind must be avoided for two reasons. First, it is an ethical command of *shari'ah* and second, it is essen-

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<sup>2</sup> Akbar, Khalid Farooq (1992), vol. 3, no. 1, pp. 23-29.

<sup>3</sup> Chapra, M. Umer (1993), p. 7.

<sup>4</sup> Nasr, S.H (1990), vol. 6, pp. 32-51.

<sup>5</sup> Husaini, S. W. Ahmad (1980), pp. 1-15, 144-145.

tial for protecting the public interest and universal common good of all mankind and other 'people' of Allah.

Llewellyn<sup>6</sup> presents an Islamic legal methodology relating to the use of land, water, vegetation, and animals. He says that the ultimate purpose of *shari'ah* is to seek the welfare of the entire creation because each element of this creation serves its ordained role by contributing to the cosmic design and purpose. He claims that all beings are united in aim and benefit the whole universe. He discusses some principles derived from the Quran, *sunnah*, and Islamic *fiqh* to protect the environment. He opines that appropriate rules can be designed under the principle of 'No Injury' to check the environmental degradation. He assigns the task of managing public ownership of scarce resources to the state.

After reviewing the Islamic point of view, it is pertinent to present briefly the secular viewpoint particularly its mainstream arguments regarding the nature of the environmental problem. It is important to mention that the quantitative aspect of the problem relating to its magnitude and impact is not reviewed here.<sup>7</sup>

## 2.2 Secular Viewpoint

The secular viewpoint considers different forms of environmental hazards as outcome of the growth process. The increasing number of factories are emitting smoke on a massive scale. Similarly, the burning of oil, gas, and coal in power plants and in millions of prime movers are releasing billions of tonnes of poisonous gases including carbon monoxide and various components of nitrogen and sulphur. The industrial waste containing acids and metals is polluting the water. This is causing human diseases and is also threatening species in the water. The large scale cutting of forests throughout the world is further aggravating air pollution.

A closer examination of the above explanation reveals that it is an incomplete explanation of the problem. A more appropriate explanation can be found by focusing on the secular lifestyle, market distortions, and the role of lobbying.

The Western culture has given rise to 'consumerism' as a style of life. Among the set of institutions shaping this culture, the banks (with their attractive schemes of credit cards and credit lines), cinemas, TVs, and, advertising agencies are important. Every individual under the influence of this culture wants to consume more and more even though it may not be justified on the basis of his long-run income. Such a lifestyle bears adverse implications for the ecosystem in two ways. One, it creates a greater demand for the natural resources which the system is unable to meet on sustainable basis. Second, it generates pollution far exceeding the recycling capacity of the system.

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<sup>6</sup> Llewellyn (1984), pp. 25-49.

<sup>7</sup> A substantial amount of literature is available on this aspect; a concise and an elegant summary of which is available in two documents: (i) *World Development Report*, 1992, pp.1-20 and (ii) *Time*, June 2, 1989.

Another factor is market distortions.<sup>8</sup> As pointed out earlier, a large part of pollution is generated by factories. Under the existing market system, the producers guided by private profit considerations tend to ignore the social cost of pollution caused by their factories. Consequently, more pollution is produced.

The third factor relates to the negative role of lobbyists. They pressurize the legislators against enacting environmental protection laws. Their typical argument is that implementation of the environmental laws drives up the cost and lowers the demand.<sup>9</sup> This may not really be the case. It is more likely that the demand for environmentally safe products would increase at each price due to the consumers' taste for such products.

### 3. ISLAMIC PERSPECTIVE ON THE ENVIRONMENT

This section develops an Islamic perspective to analyze the nature of the environmental problem. In this regard, it first defines the environment and then states its significance for the human and non-human beings.

Environment refers to the complex of physical, chemical, and biological factors affecting human and non-human beings. Within the ambit of environment, a host of ecosystems are functioning in which particular groupings of life forms interact with the environmental segments.<sup>10</sup> The natural ecosystem is a highly diverse and balanced system. It is composed of many species, each of which is more or less equally represented. Without the environmental segments, the living organisms cannot sustain themselves and will ultimately perish. The former is inevitable for the latter. There is deterministic relationship between the two.

The Islamic perspective on the environment rests on the belief that Allah (swt) is the Creator and Sustainer of the universe. The whole universe along with all of its factors has been created with perfect wisdom (*hikmah*). The number, quantity, and quality of these factors is precisely determined by the divine plan. Each factor plays its ordained role. Everything created by Allah has a just purpose which must be fulfilled. Moreover, nothing is permanent here; everything exists for a fixed period. The Holy Quran, shedding light on this point, says:

*“We created not the heavens and the earth and all between them but for just ends, and for a term appointed: but those who reject Faith turn away from that whereof they are warned.”*<sup>11</sup>

For the sustenance of His creation, Allah has placed a measured quantity of the environmental resources which matches the total demand of the resources in the

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<sup>8</sup> As a matter of fact, the market distortions are external manifestation of the materialistic secular life.

<sup>9</sup> *The Economist*, November 20, 1993, pp. 17-18, 75.

<sup>10</sup> R. Swarup, S.N. Mishra, V.P. Jauhar (1992), p. 360.

<sup>11</sup> Quran: 46:3.

universe. This implies the existence of environmental balance in the natural ecosystem. Hence, Islam looks at the environment from the standpoint of balance. It envisions the environmental balance as a part of the universal 'grand balance'. The Quran describes the notion of environmental balance in various terms like 'adl', 'qadar' and 'mouzoon'.

The term 'adl' literally means acting justly, rightly, or equitably. While explaining the meaning of 'adl', one interpreter of the Quran has observed that the universe has been created in balanced form.<sup>12</sup> Similarly, most of the early interpreters interpret the term, 'mizaan' in the meaning of 'adl'.<sup>13</sup> Additionally, some other terms 'haq' and 'qist' have also been interpreted to have the same meaning. All of these terms, therefore, support the notion of environmental balance.

The Quranic term 'qadar' gives even more direct meaning of the environmental balance. The literal meaning of 'qadar' is a specified measure or amount either of quantities or qualities. This term corroborates the notion of balance in the following *ayah*:

*"Verily all things We have created in proportion and measure."*<sup>14</sup>

The above *ayah* makes a general statement about the existence of equilibrium in everything. The process of creation and growth of all things follows the principle of balance which, in the above *ayah*, has been referred to as 'proportion and measure.' Islamic scholars have noted application of this principle in numerous living organisms. They have observed that in certain cases the balance is maintained through a negative relationship between the rate of reproduction of the organisms and their age. The organisms having excessive rate of reproduction have shorter age.<sup>15</sup>

The notion of environmental balance is further supported by another term 'mouzoon' which occurs in the first of the following *ayahs*:

*"And the earth We have spread out, set therein mountains firm and immovable and produced therein all kinds of things in due balance. And We have provided therein means of sustenance for you and for those whose sustenance you are not responsible."*<sup>16</sup>

According to above *ayahs*, all kinds of provisions have been made for the sustenance of human and the non-human beings in a way that the quantity demanded of these provisions equals their supply. There is no question of relative shortage or surplus in the divine plan regulating these provisions. The plan ensures that an excess demand of a thing by one creation is eliminated by an identical excess supply

<sup>12</sup> Maududi, Abu Al Ala, *Tafheem-ul-Quran*, vol. 5, p. 251.

<sup>13</sup> *Tafseer-e-Usmani*, p. 689.

<sup>14</sup> Quran: 54:59.

<sup>15</sup> *Tafseer Fi Zilal-al-Quran* (Urdu) vol. 9, pp. 576-585.

<sup>16</sup> Quran, 15: 19-20.

of the same thing by another creation. There is an infinite chain of mutual dependence among the creations of Allah. In the words of a scholar, there is due order and balance in the Universal Plan of Allah.<sup>17</sup>

The foregoing discussion leads to the conclusion that there exists environmental balance in the universe. The existence of this balance in turn implies two constraints: one is that human and non-human beings can neither demand more resources than the natural ecosystem is capable of providing them on a sustainable basis. The other is that they cannot discharge their waste products into the system in greater quantities than the system is capable of recycling without impairing its productivity. The environmental problem emanates from violation of these constraints. In other words, the excessive use of the environmental resources and waste products are two basic causes responsible for the emergence of the problem. Therefore, the Islamic approach to environmental balance explicitly takes cognizance of these causes and suggests appropriate institutional arrangements for solving the problem.

#### **4. ISLAMIC APPROACH TOWARDS ENVIRONMENTAL BALANCE**

In this section, we present the Islamic approach for the environmental balance in the light of the preceding arguments. The approach basically visualizes an Islamic society, the socioeconomic and political behavior of which is consistent with the environmental balance. This society maintains the environmental balance with the help of two institutions: the Islamic way of life and the Islamic state. The first institution delineates the role of the individuals and the second demonstrates the role of the Islamic state in the environmental sector.

##### **4.1 Islamic Life and the Environment**

Islamic behavior covers all aspects of human life.<sup>18</sup> It produces balanced personalities by simultaneously catering their spiritual and material needs. The pri-

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<sup>17</sup> Ali, Abdullah Yusuf, p. 640. His commentary of the above-mentioned *ayahs* of Quran is worth noting. He writes: "And every kind of thing is produced on the earth in due balance and measure. The mineral kingdom supports the vegetable and they are in their turn support the animal, and there is a link of mutual dependence between them. Excess is eliminated. The waste of one is made the food of another and vice versa. This is an infinite chain of gradation and interdependence..."

<sup>18</sup> "Today I have perfected your religion for you, completed my favor upon you and have chosen for you Islam as your religion", Quran, 5:3. For a comprehensive account of Islamic culture and civilization, see Syed Abdul Quddus, *The Culture Pattern of Pakistan*; See also *Islami Nizam-i-Zindagi* and *Islamic Tahzeeb* by Maududi.

mary goal of the 'Islamic man' is to seek the pleasure of Allah.<sup>19</sup> *Shari'ah* provides guidance and incentives for living such a life.

The goal of 'pleasing Allah' profoundly affects the psychological and mental make-up of the individuals and makes them spiritually strong. Equipped with this strength, they are able to focus on their goal by resisting worldly temptations. Pursuance of this goal produces love and affection among them because man's attitude towards his fellow-beings is closely connected with his attitude towards Allah.

Three aspects of Islamic life: environmental consciousness, simplicity, and fellow-feeling have important bearing for the maintenance of environmental balance. Before demonstrating their role, it is essential to discuss the conceptual basis of the Islamic life. This life rests on the three fundamental principles: *tawhid*, *khilafah* and *al-akhira*. These principles provide theme and substance to the concept of Islamic life.

#### (i) *Tawhid* (Unity)

*Tawhid* is the foundation of the Islamic faith. It implies that the whole universe is created, controlled and sustained by One Supreme Being. It guides God-man, man-man, and man-universe relationships. This principle provides a Muslim unitary vision. With the help of this vision, he can see that Man and ecosystem are parts of the same universe and both are regulated by the divine law. Environmental protection becomes his religious duty. This principle thus creates moral and religious motivation for environmental protection and security.

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<sup>19</sup> We have enjoined on man kindness to his parents: in pain did his mother bear him, and in pain did she give him birth. The carrying of the (child) to his weaning is (a period of ) 30 months. At length when he reaches the age of full strength and attains 40 years he says; "O, my Lord! grant me that I may be grateful for thy favor which thou hast bestowed upon me and upon both my parents and that I may work righteousness such as thou mayest approve and be gracious to me in my issue. Truly, have I turned to Thee and truly do I bow (to thee) in Islam", Quran, 46:15.

**(ii) *Khilafah* (Vicegerency)**

Man is a vicegerent of Allah on earth.<sup>20</sup> Allah has created him to submit to His will in all aspects of life. He has endowed him with moral and physical resources to perform his functions on the earth. *Shari'ah* enjoins him to make efficient and equitable use of these resources and improve the quality of life. *Khilafah* generates many implications. Two of them, universal brotherhood and trusteeship of resources, are particularly important.

**Universal brotherhood:** *Khilafah* provides a framework of social equality and universal brotherhood. This framework produces a flexible social structure which motivates an individual to grow on the basis of efficiency and good character. It introduces social equality among human beings irrespective of color, creed, and geographical location. These characteristics promote beneficial cooperation and mutual sharing of resources.<sup>21</sup> The doctrine of self-interest implying maximization of personal utility or profit does not fit into this framework.

**Trusteeship of resources:** Allah is the actual owner of all resources. Man is required to use them in right ways. After their acquisition, he is supposed to act as a trustee, benefiting from them according to the terms of the trust.<sup>22</sup> He cannot waste resources in any case.

**(iii) *Al-akhira* (Hereafter)**

*Al-akhira* is one of the fundamental beliefs of Islam. It implies Islamic doctrine of accountability which is wider than the counterpart secular concept of accountability. A Muslim has to believe that every atom's weight of good and every atom's weight of evil will be weighed in *al-akhira*.<sup>23</sup> This belief broadens his vision. He evaluates the likely impact of his worldly choices on his life in the Hereafter before making decisions. Practically, this belief acts as a monitoring system inside the mind and heart of a Muslim and thus helps him to do good deeds and avoid bad deeds.

Islamic life has strong favorable implications for the environment. The ensuing discussion analyses these implications through three aspects of this life.

**(a) Environmental consciousness:** Islamic life is sensitive to the cause of environment. It is based on a set of values that enhance environmental consciousness of

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<sup>20</sup> Quran: 2:30; 6:165; 35:39.

<sup>21</sup> Prophet (pbuh) says, "All human beings are dependents of Allah and most beloved of them before Him is he who is good to his dependents", *Mishkat al-Masabih*, vol. 2, p. 613.

<sup>22</sup> Quran: 57:7.

<sup>23</sup> Quran:99:7, 8, 45:15, 53:31.



the Muslims. An Islamic society, therefore, produces environmental-friendly behavior which is quite helpful for maintaining the environmental balance.

Islamic teachings attach high importance to cleanliness. It is declared as half of faith.<sup>24</sup> Accordingly, Muslims observe cleanliness as a part of their religious duty. The cleanliness generates hygienic conditions in and around the residential premises. The hygienic conditions, apart from protecting the people from many diseases, enhance their physical health and productivity. This in turn promotes the cause of economic growth.

The basic environmental elements: water, air, cattle, crops, pasture, and forests occupy vital importance in the Islamic value system. The Quran and *sunnah* stress on the preservation of both the quantity and quality of these elements. For instance, water has been regarded as a basic source of life.<sup>25</sup> The traditions of the Prophet (pbuh) particularly emphasize the conservation and purification of water. The Prophet (pbuh) directed the Muslims to use less water even at the bank of a flowing stream.<sup>26</sup> He also prohibited urination in the water and in the holes of animals.<sup>27</sup> This prohibition in fact symbolizes Islamic concern about pollution of critical resources and environmental degradation, in general. Similarly, air as a key element of human life performs many useful functions including purification and fertilization. It brings the blessing of rain which fertilizes the soil. The cattle serve many useful functions for human beings.<sup>28</sup> Likewise, Islamic teachings underscore the importance of growing crops, planting of trees, and raising of gardens. Exhorting the Muslims for these activities, the Prophet (pbuh) said:

*“There is no Muslim who plants a tree or sows a field, and a human, bird or animals eats from it, but it shall be reckoned as charity from him.”*<sup>29</sup>

The companions of the Prophet (pbuh) adhering to these values had established friendly relations with the environment. It was out of this affiliation that Abu Bakr (ra) instructed his general, Yazid ibn Abi Sufyan, to strictly observe the environmental values even in the enemy territory. He wrote, “Do not cut down a tree, do not abuse a river, do not harm crops and animals, and always be kind and humane to Allah’s creation, even to your enemies”.<sup>30</sup> This instruction reflects the level of importance attached to the environment by the early Muslims and the Islamic state.

From the above discussion, it follows that Islamic teachings increase environmental-sensitivity of an Islamic society. More trees and crops are grown for the

<sup>24</sup> *Musnad Ahmad*, vol. 5, p. 342.

<sup>25</sup> Quran says: “We made from water every living thing”(21:30), “Allah has created every animal from water” (24:45).

<sup>26</sup> *Sunan Ibn Majah*.

<sup>27</sup> *Mishkat al-Masabih*, vol. 1, p. 115.

<sup>28</sup> Quran: 30:46; 36:42.

<sup>29</sup> *Mishkat al-Masabih*, vol. 2 p. 442.

<sup>30</sup> Suyuti, p. 97.

benefit of human and non-human beings. In addition, there is general tendency to avoid creating different forms of pollution and environmental hazards. These efforts favorably affect both the supply and demand sides of the environmental balance.

**(b) Simplicity:** Simplicity is an important feature of Islamic life having far-reaching implications for the environmental balance. Simplicity occupies key place in the Islamic pattern of social life. The Quran, *sunnah* and caliphate precedents strongly support leading a simple life. The Holy Quran has ordained such a life by proscribing extravagance. It says:

“Do not be extravagant, surely Allah does not like extravagants.”<sup>31</sup>

The Prophet (pbuh) lived an extremely simple life. Umar (ra) narrates some glimpses of his simplicity after visiting the house of the Prophet (pbuh). He saw a leather pillow filled with date-material under his head and the leaves of trees were spread under his feet. A leather bag was also hanging near his pillow. He saw marks of the mat on the back of the Prophet (pbuh). Umar (ra) started weeping when he saw this.<sup>32</sup>

The four rightly-guided Caliphs lived very simple life. Abu Bakr (ra) had only two sheets of cloth for his use and ate simple food. Umar (ra) lived an austere life. He had instructed his governors not to ride horses of Arab breed, or eat fine flour, or wear fine clothes or post guards at their residence. Usman (ra), the third Caliph, lived a simple life in spite of being one of the richest persons of Madinah. Similarly, the personal and family life of Ali (ra) was very simple.<sup>33</sup> (The stress on simple living may create the wrong impression that Islam undervalues economic activities. That is not true. On the contrary, Islam favors brisk economic activities and accords high status to those engaged in economic enterprises. It urges a Muslim to seek his share from the bounties of Allah through active efforts. He is under obligation to earn his/her family's livelihood. The Prophet (pbuh) declared the earning of lawful livelihood as an obligatory duty for every able-bodied person).<sup>34</sup>

As a matter of fact, the Islamic moral system induces every Muslim to work hard. At the same time, it discourages him not to squander his income in any form, particularly on purchase of fashion or luxury goods. In a secular society, the fashion goods are considered to be status symbols. People buying these good adopt abnormal behavior. It has been found that the demand curve of these goods is positively sloped.<sup>35</sup> The Islamic economy does not encounter such type of abnormality because the demand for fashion and luxury goods is reduced to the mini-

<sup>31</sup> Quran: 6:141.

<sup>32</sup> *Sahih al-Bukhari*, vol. 4, p. 1867.

<sup>33</sup> Mueen-ud-Din Nadvi, Haji, *Siyar-us-Sahaba*

<sup>34</sup> Abu-Nuaim Asphahani (1987), *Hulyah al-Alyaa*, vol. 7, p. 126.

<sup>35</sup> Coelho, P.R.P. and McClure, J.E (1993), vol. XXXI, pp. 595-608.

mum on account of moral and legal restrictions. The stress on simple living also raises the question of why a person should work more when he needs to spend? But this does not pose a problem. By living a simple life, a Muslim releases some of his income for the spending of others to please Allah. Moreover, he saves to make bequeath. The Prophet (pbuh) said: "It is better that you leave behind you your relatives well off rather than obliged to beg alms of others."<sup>36</sup>

In general, the consumption behavior of a typical consumer in an Islamic economy is guided by the following considerations:

1. Consumption of *haram* (prohibited) goods is proscribed.
2. Consumption of *halal* (permissible) goods faces following constraints:
  - i) Waste and extravagance have to be avoided.<sup>37</sup>
  - ii) An overall balance in consumption has to be observed.<sup>38</sup>
  - iii) Islamic institutions like inheritance, *haj*, *zakah* and *sadaqat* motivate him to make positive savings because a lot of spiritual reward is associated with them.<sup>39</sup>
  - iv) The *sunnah* of the Prophet (pbuh) and the lives of four Caliphs whom he wants to emulate induce him to live a simple life.

The above guidelines distinctly change the consumption pattern of an Islamic economy as a result of which a typical consumer of this economy faces a smaller basket of consumption goods than a secular consumer in the same economic environment.<sup>40</sup> Thus, an Islamic economy encounters reduced consumption expenditure than a counterpart secular economy at the same level of income.

The environmental implications of simple living are significantly favorable. These implications occur through two channels. The first channel operates through the reduced input demand for the natural resources due to the reduced consumption of the final goods. Consequently, a substantial amount of saving of the natural resources takes place which tends to augment the existing supply of these resources. The second channel controls the quantity of waste material which occurs as a result of reduced consumption. The smaller amount of waste material reduces the scope for bacterial exposure. This helps improve health conditions and also saves substantial amount of expenditure incurred on recycling and garbage disposal. Both of these channels thus generate favorable implications for the environmental balance.

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<sup>36</sup> *Sahih-al-Bukhari*, vol. 3, p. 1006.

<sup>37</sup> Quran: 7:31, 17:26.

<sup>38</sup> Quran: 17:29. This *ayah* of Quran demands that a believer should, observe a balance between his capacity to consume and other's needs.

<sup>39</sup> *Haj* and *zakah* are obligatory duties of those who have means. *Sadaqats* have manifold rewards. See Quran, (2:261). For detail, see Maulana Ashraf Ali (1986), pp. 1-93.

<sup>40</sup> On this point Fahim Khan concludes, "that Islamic consumer is likely to face a smaller basket of consumption to pick up from than if he were a secular consumer", Fahim Khan (1984), pp. 1-24.

(c) **Fellow-feeling:** Fellow-feeling is another distinctive feature of Islamic life having vital bearing on the maintenance of environmental balance. Fellow-feeling is an integral part of Islamic brotherhood. For the understanding of the nature of fellow-feeling, it is essential to understand the nature of Muslim brotherhood.<sup>41</sup> Many traditions of the Prophet (pbuh) expound the nature of this brotherhood. Three of which are noted here:

- i) *“A Muslim is a brother of another Muslim; he neither wrongs him, nor leaves him without help”*.<sup>42</sup>
- ii) *“I swear by Allah, one cannot become fully Muslim until he (or she) likes for others whatever he (or she) likes for himself (or herself)”*.<sup>43</sup>
- iii) *“Muslim will appear to you as a single body in terms of mutual love, affection, and onward. Whenever some organ of the body is hurt, the whole body cooperates with that organ by getting fever and remaining sleepless”*.<sup>44</sup>

The above-mentioned traditions exhort the desire for the establishment of a Muslim brotherhood whose members share mutual love, affection and cooperation. Practically, the Prophet (pbuh) himself set an example of a Muslim brotherhood by instituting *moukhat* (brotherhood) in Madinah. This brotherhood joined the migrant and local families together and both shared a common pool of resources.<sup>45</sup> Islamic laws also strengthen the bonds of brotherhood by generating social commitment among the Muslims. For instance, the laws relating to the rights of the family, relatives, neighbors, needy, community, and the Islamic state establish rights of others in one's income and wealth.<sup>46</sup>

From the above discussion, it follows that members of an Islamic society care for one another. Each member feels that his personal welfare is related to the welfare of others. Islamic history is replete with such examples two of which are reported here: There was a famine in Madinah. Usman (ra) bought a large quantity of grain from outside. The local traders approached him to sell the whole supply of grain at a very high price. Usman (ra) refused and instead distributed it free of cost by saying that Allah would give him manifold recompense.<sup>47</sup> Similarly, a companion of the Prophet (pbuh) received a goat head. He thought that his neighbor was more needy; so he sent it to him. The recipient had the same assumption about a third companion and gave it to the third. In this way, it circled in seven houses till it returned to the first person again.<sup>48</sup>

These incidents illuminate the level of significance which members of the Islamic society attach to social interest. They are always willing to adjust their indi-

<sup>41</sup> According to Quran the believers are a single brotherhood (49:10).

<sup>42</sup> *Sahih al-Bukhari*, vol. 2, p. 863.

<sup>43</sup> *Sahih al-Bukhari*, vol. 1, p. 14.

<sup>44</sup> *Sahih al-Bukhari*, vol. 5, p. 5.

<sup>45</sup> Al-Hashmi (1991).

<sup>46</sup> Quran: 2:215, 4:36.

<sup>47</sup> Al-Muhib al-Tabri, (1984), vol. 2, pp. 43-44.

<sup>48</sup> Baihaqi (1990), vol. 3, p. 259.

vidual behavior for social interest. This conviction leads us to argue that economic agents in an Islamic economy optimize joint objective functions. There is considerable motivation for an agent to include welfare of the society as an argument in his objective function.<sup>49</sup> Such behavior is quite helpful in combating environmental pollution.

Production externalities are one of the major causes of the pollution problem. In a secular society, the cost of pollution, being essentially a social cost, does not enter into the profit calculation of the firms and hence more pollution is produced. The Islamic economy, with its Islamic value system, is relatively in a better position to address production-related pollution. The Muslim entrepreneurs, imbued with the spirit of brotherhood and fellow-feeling, do not base their production decisions on a narrow index of private profit. Instead, their economic decision-making is guided by a wider index which includes both material and spiritual gains. Under the guidance of this index, the producers internalize the cost of pollution caused by their production decisions. Consequently, the magnitude of pollution and hence the severity of the environmental problem is reduced. For the sake of illustration, we take a simple example of pollution creating commodity X produced competitively.

Each firm is in equilibrium when

$$MC_x = P_x$$

where  $MC_x$  is the (private) marginal cost of production. Now, assume that each unit of X generates a certain quantity of pollution. *Mohtasib* (ombudsman) has estimated the dollar value of this pollution produced for every unit of X called marginal external cost (MEC). Thus, a measure of marginal social cost (MSC) is obtained by adding MEC to  $MC_x$  i.e.

$$MSC_x = MC_x + MEC_x$$

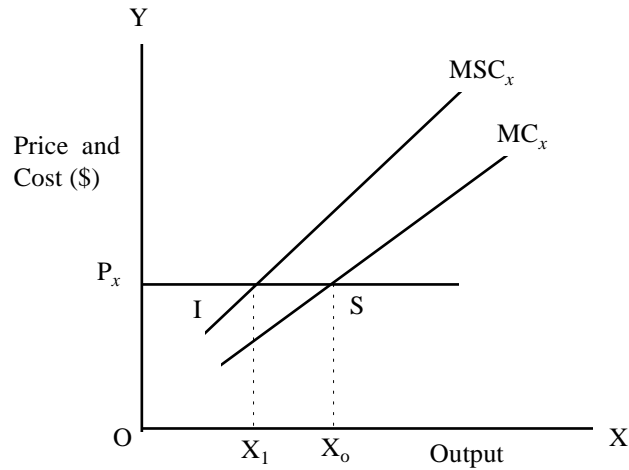
There is a divergence between the private and the social cost of production and, hence, the competitive market forces will be unable to realize optimum allocation of resources from social point of view. For such an allocation of resources, each firm is required to produce where

$$P_x = MSC_x$$

The framework of Islamic economy induces each entrepreneur to equate marginal social cost with the market price. For the purpose of contrasting the likely choices of the secular and Muslim entrepreneurs, we employ the following figure.

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<sup>49</sup> This point is more convincingly argued elsewhere. See, Raihan Sharif (1991), pp. 1-30.



According to the figure, the  $MSC_x$  curve lies above  $MC_x$  by an amount equal to dollar value of MEC assumed to be independent of the level of output. The secular entrepreneur chooses point S on  $MC_x$  curve and produces  $X_0$  amount of X. On the other hand, the Muslim entrepreneur produces  $X_1$  amount of X by choosing optimal point I on  $MSC_x$  curve. Since  $X_1$  lies to the left of  $X_0$ , lesser amount of X is produced by the Muslim entrepreneur.

The above analysis clearly shows that the problem of pollution caused by externalities will be less severe in an Islamic economy than in a secular economy. However, if the voluntary actions of the private sector turn out to be inadequate to tackle the pollution problem, then the Islamic state intervenes to correct the situation.

#### 4.2 Islamic State and the Environment

The fundamental objective of the Islamic state in the environmental sector is to ensure sustainability as well as equitable and efficient use of natural resources. For this purpose, it undertakes a variety of measures in four main areas: planning, legislation, monitoring, and public ownership of resources. Islamic history reveals that the Islamic state implemented certain measures in these areas during the time of the Prophet (pbuh) and his Caliphs, and medieval period. A detailed account of the state measures is beyond the scope of this paper. However, a brief description is given below:

##### Planning

The Islamic economy cannot entrust the whole task of environmental management to the market system because of two major shortcomings. Firstly, the eco-

conomic agents ignore the social costs of pollution while making production decisions as discussed above. Secondly, these agents have short-run horizon. Their efforts at profit maximization in the short-run lead to over-using and exhaustion of natural resources. Consequently, future generations suffer on account of their actions which is against the spirit of intergenerational justice. Islamic history reveals that Umar (ra) refused to distribute the conquered Iraqi lands among the Islamic army on the ground that coming generations have also their due share in these lands.<sup>50</sup>

Because of the above mentioned shortcomings, the Islamic state does not rely on the unguided market system for resource allocation in the environmental sector. For this purpose, it designs an environmental protection plan which caters the long-term demand of this sector on sustainable basis. The plan is based on two kinds of estimates: maximum sustainable quantity of natural resources and maximum tolerable amount of waste and pollution. These estimates serve as macro parameters of the economy. The state allows operation of market forces within the limits defined by these parameters. It is interesting to note that this approach is different from the contemporary secular approach adopted in the Western countries which focuses on microeconomic efficiency in the environmental sector through unguided market system.

### Legislation

Islamic laws relating to environment have been codified in the *fiqh* literature. *Shari'ah* allows the state to enact environmental laws that effectively deal with the multifaceted pollution problem. The principle of '*No Injury*' empowers the state to take action against any industry causing excessive environmental hazards either by closing it or by curtailing its output through taxes or quotas even though this may impose economic loss to the owners of the business.<sup>51</sup>

Islamic laws relating to the barren and fallow unowned lands tend to bring these lands under cultivation. In this case, the Prophet (pbuh) established the following laws:

*"Whoever revives barren lands is entitled to what he has revived".*<sup>52</sup>

Similarly, a complete code relating to the use of water both for drinking and irrigation purposes is available in the *fiqh* literature.

Islamic laws encourage afforestation and discourage deforestation. The Prophet (pbuh) forbade cutting of trees in the desert. The principle underlying this prohibition can be extended to cover a number of cases relating to the security of general habitat. He established the rule that forest and the wild-life are free goods that are to be maintained under the trusteeship of the community. He established *harims*

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<sup>50</sup> Shibli Nomani (1957), p. 46.

<sup>51</sup> Husaini, S.W.A., (1980), p. 80.

<sup>52</sup> Beloch (1989), p. 66.

zones around Makkah, Madinah and Taif and decreed that no native trees could be cut. Islamic law protects wild-life. Islamic law forbids setting of fights between animals and birds and their killing by way of hobby.

The two general features of Islamic laws are so important that they must be mentioned here. The first is their uniform application which leaves no scope for any preferential treatment in their dispensation.<sup>53</sup> The second is their ethical nature on account of which they are more likely to be acted upon. This feature is particularly relevant for the environmental laws because ultimate sources and effects of environmental pollution are difficult to determine.

### Monitoring

The Islamic state can set up an environmental monitoring agency to supervise implementation of the environmental policy. Historically, this role was performed by the institution of *hisbah*. This institution used to perform entire municipal functions like removal of garbage, water supply and implementation of pollution laws. The revival of this institution as a monitoring agency in the contemporary Muslim countries will be very helpful for the safety of environment.

### 4.3 Public Ownership of Resources

The Islamic state is responsible for the maintenance and development of state lands, endowments, common and unowned lands. It reserves suitable lands for the development of forests and wild-life preservation. The state also owns the key elements of the infrastructure; roads, ports, water supply system, public parks, gardens and waterways. It ensures that these resources are properly used to meet the needs of present and future generations. Similarly, Islamic state can assume the control of enterprises emitting large amount of pollution for the safety and security of the environment.

In the past, the *waqf* institution played a vital role in promoting general welfare. This institution can also be reactivated and its land resources can be used for afforestation, watershed management, and wild-life conservation. The evidence suggests that this institution still exists with substantial amount of land resources in many Muslim countries.<sup>54</sup>

## 5. POLICY IMPLICATIONS

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<sup>53</sup> The life of the Prophet (pbuh) is full of incidents where he dispensed justice. An influential woman of the Quraish tribe was involved in a theft case. He stopped one of his companions from pleading her case by saying:

“If Muhammad’s daughter had committed such a crime, she would also have got same punishment”. *Sahih al-Bukhari*, vol. 6, p. 2491.

<sup>54</sup> Islahi, Abdul Azim (1992)



The Islamic approach has vital policy implications for any Islamic state in modern times. The state would design an environmental policy the general concern of which would be to create favorable conditions for living an Islamically social life. This kind of life is critically important for generating friendly responses for the environment.

The approach embodies concrete measures for implementation by the Islamic state. These are: setting up of ecological resource parameters, designing of incentive system, monitoring of the environmental regulations, and development of ecological resources in the public sector.

The Islamic state, taking a long-term view of the demand and supply forces, would set up the ecological resources parameters at the macro level. In this regard, the state would prepare two kinds of estimates: maximum sustainable quantity of these resources and maximum tolerable amount of waste and pollution. These estimates would then serve as parameters of the macroeconomy and market mechanism would be allowed to operate within them.

The Islamic state would design a suitable incentive system. The state regulations would provide for penalties and rewards to mold the behavior of firms and individuals. In some cases, the state would impose maximum penalty by closing down a polluting firm; while in others, it would impose taxes. By imposing tax on 'emission', the state provides an economic incentive to the polluters to reduce the pollution discharge.

The Islamic state would set up a monitoring agency to supervise the implementation of environmental laws. This agency would perform an extended role of *hisbah* in modern times. It would also suggest improvements in environmental laws in the light of new realities.

The Islamic state would undertake ecological resources' development in the public sector. For this purpose, it would use the state lands. The revival of the institution of *awqaf* would also strengthen the efforts of the public sector to develop ecological resources.

## 6. CONCLUDING REMARKS

The paper has studied the question of environmental balance in an Islamic economy. For this purposes, it has developed its own approach which is based on two institutions: the Islamic way of life and the Islamic state. In this context, the paper has argued that they contribute significantly in maintaining environmental balance.

The analysis shows that Islamic life is critically important for the conservation and promotion of ecological resources. In particular, the paper identifies three aspects of this life, namely, environmental consciousness, simplicity, and fellow-feeling all of which have strong bearing for the environment. Discussing the role of consciousness, the paper finds that Islamic teachings enhance environmental awareness of the people which enables them to establish friendly relationship with the nature and environment. Historical experience shows that the premier Muslim society had this kind of relationship.

The paper also finds a simple lifestyle to be very helpful for environmental security. It helps in conserving the ecological resources and in saving financial resources on the waste disposal and pollution management system. Similarly, the individuals imbued with the spirit of fellow-feeling internalize the social cost of pollution which reduces the amount of pollution in the society.

The paper assigns an active role to the Islamic state. In this regard, it has discussed planning, legislation, monitoring, and resource development roles of the state. Substantiating the legislative role, it finds that Islamic laws effectively address the problem of pollution in a wide variety of situations. In addition, these laws have strong moral support behind them on the basis of which they are more likely to be properly implemented.

The paper has proposed setting up of an environmental monitoring agency and reviving of the *hisbah* and *awqaf* institutions in the contemporary Muslim countries. These institutions can play an important role in the development of ecological resources for the control of pollution.

Finally, the paper has reached the conclusion that the revival of Islamic lifestyle and Islamic state are the two instruments through which environmental balance can be sustained over time.

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