

Disseminating the Islamic Concep in Conservation of Environment: Study Insights From Bangladesh

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ABSTRACT

Human life and the environment are inextricably linked to each other. The environment provides all the necessary elements important to human existence. But the mankind has some duties too. But we are often avoiding these duties. Though we know the impact of environment in our lives but awareness has been a long due. Even integrating it with general education, campaigns, legal measures often fall short in establishing the thing. In this study we tried to analyze if we can solve the problem by connecting religion and environment. This study disseminates the conservation of the environment in accordance with the rules of Qur'an and Hadith, and conducts surveys among environmentalists and Islamic thinkers to find out how practical and useful these rules of the Islam are in protection of the environment. Information about the rules of Islam on conservation of the environment has been taken through conducting questionnaire survey and FGD (Focus Group Discussion) among Islamic thinkers. In this case, they have expressed the opinion that it is possible to protect the environment in accordance with Islamic law. Environmentalists were asked if it was possible to protect the environment based on Islamic rules. 70% expressed the opinion that protection of the environment is possible if Islamic rules are properly implemented. But rest of them have expressed different views and said that beside Islamic law, environmental law needs to be updated and implemented properly to protect the environment. Similar studies have been conducted in other countries also. Indonesia and Malaysia are prominent of them. Furthermore, it has been proved that the connecting environmental conservation with Islamic teachings provide impactful results. This study aims to correlate the Islamic concepts in preserving the environment and their impacts in perspective of Bangladesh.

ARTICLE INFORMATION

Keywords:

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Environmental
Conservation, 4R,
Waste
management,
Bangladesh

1. Introduction

In the Holy Qur'an, Allah Almighty says that *"I have created everything in the world for the benefit of mankind"* (Kementerian Agama, 2007). It is evident from the above verse of Holy Qur'an that all living and inanimate things created on earth have been created by Allah for the needs of the human race. The environment is one of the most important factors that help people survive on earth and it is a great blessing from the Almighty. Natural resources are the important elements of the environment, and these natural resources are closely related to the mankind and all living creatures that are created by Allah (Mat Akhir & Abdul Halim, 2017).

The depletion of natural resources is causing the ecological imbalance which in turn will jeopardize the survival of mankind. According to the direction of the Islamic scriptures, the Believers are not allowed to destroy any element of the natural world just for economic benefits. The basic teaching of Islam in terms of environmental ethics is to improve the environment, not to destroy it. There are repeated advices in Islamic scriptures for the people to keep a balance with the natural world and to take care of what has been created Allah SWT. But unfortunately, Muslims are not fully aware of these teachings of Islam, the current Muslim practices reveal a negligible perception of the Islamic view of the environment. Allah narrates in the Holy Quran, *"O Children of Adam! Eat and drink, but do not waste. Surely He does not like the wasteful."* (Kementerian Agama, 2007).

The environment is an integral part of human life, so the environment must be seen as one factor of the ecosystem which has to be esteemed and sustained. Negative behavior can harm the environment, while positive behavior can promote permanent environmental sustainability. Therefore, human beings have an accountability to behave well to the living things in their surroundings. As a religion of prosperity and peace, Islam encourages Muslims to maintain a peaceful life with both humans and non-humans. According to Islamic view, all creatures are included in the family of God, with the human being just one member of them. In Islam, people are given the honorable position of the crown of creation not only for domination over others, but also but also for taking care of

them on behalf of the Creator (Abu Sayem & Abu, 2018). In the Holy Qur'an, Allah Almighty says that *"Eat and drink of Allah's provisions, and do not go about spreading corruption in the land"* (Kementrian Agama Republik Indonesia, 2019). This paper discusses the importance of preventing environmental pollution as a result of development activities and how Islamic rules can reduce this environmental damage. Finally, the effectiveness of these rules and regulation in Islam in protecting the environment has been explored through surveys among environmentalists and scholars.

As the main source of reference in Islam, the Qur'an and Hadith have provided answers to all the problems and questions in human life. Therefore, the verses of the Qur'an and quotes of Hadith which are related to the environment should always be used as a reference for the analysis of environmental issues. In the Quran and Hadith there are several verses and quotes explaining environmental attention. These verses and quotes in fact have offered steps that the common human is in pathway to preserve the environment (Mat Akhir & Abdul Halim, 2017). Islamic legislation plays an important role in changing values, motivations, behaviors and policies in support of environmental protection. The integration of religious values such as the concepts of *tawhid*, *caliph*, and *mizan* with science increases the involvement of Muslims as environmental activists (Rahman & Jalil, 2021).

Several reasons which act as a catalyst for the environmental damage in Bangladesh. Wastage of excess natural resources such as excessive extraction of ground water, unnecessary use of electricity and gas, cutting down trees, filling up rivers, deforestation, heavy reliance on non-renewable energy are prominent among them. Disposing of canals and river water by discharging liquid and solid wastes is also a waste of water which poses a serious threat to the environment. In order to prevent wastage, Allah has said in the Holy Qur'an, *"And do not spend your wealth on unnecessary things. Know that those who squander waste are the brothers of Satan, and Satan is ever ungrateful to his Lord"* (Kementrian Agama Republik Indonesia, 2019). In another verse Allah says *"O children of Adam, wear beautiful clothes at every prayer. And eat and drink; But don't waste it. Surely, He does not love the*

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extravagant" (Kementrian Agama Republik Indonesia, 2019). The Prophet (peace and blessings of Allah be upon him) gave various advices and instructions to his followers to prevent wastage. According to a hadith, the Prophet (peace and blessings of Allah be upon him) said, *"Do not throw any impurity or waste into stagnant water, because you will use it"* (Abu Dawood, n.d.). Waste of resources such as water, electricity, gas, food, clothing is prohibited in Islam. According to the narration of Hazrat Ibn Omar (RA), *once the Prophet (SAW) was passing by Sa'd (ra). At that time Sa'd (ra) was performing ablution. His ablution was consuming more water. The Prophet (peace be upon him) saw it and said, why this waste? Sa'd (ra) asked, is there any waste in ablution? The Prophet (peace and blessings of Allaah be upon him) said, 'Yes, even if you perform ablution in a flowing river* (Sunan Ibn Majah, n.d.).

Through these hadiths and verses it is clear that the one who wastes or destroys resources will be held accountable to Allah for his deeds and will be punished. The main objectives of this study are: a) to identify the importance of environmental conservation, b) identify the role of Islamic law in protecting the environment, c) investigate whether it is possible to protect the environment by following Islamic rules. Reviewing the results of the study, it can be concluded that the proper implementation of Islamic rules on environmental protection and its proper dissemination among the people will play an important role in environmental conservation. This study is going to be the first step in Bangladesh showing the possibilities of conserving environment through applying Islamic rules and regulations. In Bangladesh, there is severe environmental crisis in different areas like air and water and noise pollution in Residential and Industrial areas. Extreme pollution events occurred in peripheral rivers surrounding Dhaka city and Karnaphuli River in Chittagong city. It has been found that other urban rivers are also in critical condition especially Korotoa, Teesta, Rupsha, Pashur and Padma. The pollutants flowing with water made a major pollution in downstream areas of rivers. Metals concentrations in river water were found to be higher in dry season. Dissolve oxygen (DO) was nearly zero in Buriganga River and several points in Turag, Balu, Sitalakhya and Karnaphuli River. NO_3^- , NO_2^- and PO_4^{3-} pollution occurred in

different rivers. Zn, Cu, Fe, Pb, Cd, Ni, Mn, As and Cr concentration was above drinking water standard in most of the river and some metals was even above irrigation standard in water from several rivers (Uddin & Jeong, 2021).

Textile sludge from different industries also create burden to the existing waste management sector of the country and responsible for occurring different types of diseases including kidney disease and cancer (Muhib & Kabir, 2021). Surface water quality in and around Dhaka and other major cities is deteriorating daily, leading to a higher incidence of waterborne diseases in those regions. According to the Swiss air quality technology company IQAir, Bangladesh ranked 1 in air pollution level out of 118 countries (iqair.com/Bangladesh). For this polluted air in city area, people are facing many respiratory diseases and their life expectancy is decreasing. Waste management scenario in Bangladesh is also very fragile. Different types of solid waste generated both from household and commercial facilities deteriorating the environment due to proper utilization of resources, lack of awareness and mismanagement from the authority (Muhib, 2021). The pandemic COVID-19 makes the scenario even worse in Bangladesh (Muhib & Rayhan, 2021). The excessive usage of facemask and PPE degrades the environment and subsequently leading to extra source of microplastic pollution in Bangladesh (Muhib & Akter, 2021).

Bangladesh is one of the most populated countries in the world and most of the environmental degradation is the result of feeding vast majority of people and the country's development. To protect environment from this problem, country needs very expensive resources. Bangladesh is a developing country and it has not enough ability to purchase all those resources. As 90% population of Bangladesh is Muslim and most of them are practicing religion, if the Islamic rules and attitudes as well as international rules and regulations towards the environmental conservation let them understand it will be easier to maintain the balance of the environment and more than half of pollution can be removed from the environment.

2. Literature Review

3. Methodology

3.1. Primary Data

Primary data was collected through standardized Focus-Group discussion, questionnaire survey. 11 questions were prepared for environmentalists and 9 for Muslim scholars. The study was conducted among 300 participants, where 150 were environmentalists and remaining 150 were Muslim scholars. There are no specific data sources regarding the exact number of environmental specialists and Muslim scholars in Bangladesh. However, it is known that various universities and institutions in Bangladesh offer environmental science and related programs, which would indicate a significant number of professionals in this field. A substantial number, given the presence of multiple institutions and departments dedicated to Islamic studies, but no exact figure is provided.

To calculate the sample size with a **90% confidence level**, we adjust the Z-value to 1.645 (as this corresponds to a 90% confidence level).

The formula is the same: $n = \frac{Z^2 \cdot p \cdot (1-p)}{e^2}$

Where:

- $Z = 1.645$ (for a 90% confidence level)
- $p = 0.5$ (estimated proportion of the population)
- $e = 0.05$ (margin of error)

Substituting the values:

$$\begin{aligned} n &= \frac{1.645^2 \cdot 0.5 \cdot (1-0.5)}{0.05^2} \\ &= \frac{2.7025 \cdot 0.25}{0.0025} \\ &= 270.25 \end{aligned}$$

Thus, the required sample size would be approximately **271 individuals** for each group (environmental analysts and Muslim scholars) to achieve a 90% confidence level with a 5% margin of error. We have taken a sample size of 300 individuals which is above 90% confidence level.

3.2. Secondary Data

The study also reviewed a number of relevant literatures and earlier research paper,

from published sources, journals, books, newspapers. Various verses about conserving the environment mentioned in the Qur'an and hadith, Ijma, Qiyas, Istihsan, Ijtihad to enrich the introductory and the literature review aspects of the research work.

3.3. Analytical Techniques

The data obtained from the study are analyzed using simple descriptive statistical techniques such as Statistical Package for the Social Sciences (SPSS) (27.0.1.0) and Microsoft excel (2019). Results are presented in pictorial and graphical form using pie and bar charts to ensure adequate illustrations. Chi-Square Test for Independence is tested through Null Hypothesis (H_0) and Alternative Hypothesis (H_1).

Chi-Square Calculation

The chi-square statistic is calculated using the formula: $\chi^2 = \sum (O-E)^2/E$

Where:

- O = Observed frequency (the actual data values from the table)
- E = Expected frequency (calculated based on the assumption that the null hypothesis is true)

The expected frequency for each cell is calculated using:
 $E = (\text{row total} \times \text{column total}) / \text{grand total}$

The degrees of freedom (df) for the Chi-Square Test are calculated as: $df = (r-1)(c-1)$

Where:

- r = Number of rows
- c = Number of columns

For each Figure, Appendix 01 (Environmental Specialists) and Appendix 02 (Muslim scholars), the number of rows is 2 (Yes and No), and the number of columns is 1 (question). Thus, the degrees of freedom for each individual test would be $(2-1)(1-1)=1$.

Significance of Chi-Square

Distribution: Once we have calculated the chi-square value for each question, we compare it to the critical value from the chi-square distribution table with $df = 1$ and a significance level of 0.05 (95% confidence level). If the calculated chi-square value exceeds the critical value, we reject the null hypothesis, indicating a significant association.

When the chi-square analysis leads to a rejection of the null hypothesis, it indicates a significant association between adherence to Islamic laws and the perceived effectiveness of environmental conservation. Conversely, if the null hypothesis is retained, there is no statistically significant association between the two factors.

4. Results and Discussion

4.1. Importance of Islamic law for the conservation of environmental elements

The environment consists of various elements and maintaining the proper balance among them is essential for sustainability. Among the most important environmental components are water, soil, sound, animals and plants etc. The Qur'an and Hadith, have been instructed in a proper guidance to preserve these elements of the environment.

Air is one of the most vital elements of the environment. and its essential for the survival of all living creatures including plants and animals. But this critical element of the environment is being polluted by natural and man-made causes. Among the natural causes are air pollution due to volcanic eruptions and forest fires. One of the primary man-made reasons for air pollution is the emission of black smoke due to the increasing use of fossil fuels in development activities. Another significant factor is excessive deforestation, which decreases oxygen levels and increases carbon dioxide in the atmosphere. The air is composed of various gases, including oxygen, nitrogen, carbon dioxide, argon, and neon, each existing in specific proportions. Alterations in these proportions, whether increased or decreased, can lead to air pollution and pose severe risks to human health and the environment. If the proportion of any gas increases or decreases, it can cause air pollution and create a serious crisis for mankind. One of the most alarming global concerns of the world today is the greenhouse effect, due to the rising levels of carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O). These increases largely due to deforestation, setting up industrial plants and building residential areas. But Prophet (peace and blessings of Allah be upon him) the said in the hadith: *"If you know for sure that the Hour has come, then if you have a sampling of a tree in your hand, which can be planted, you will plant*

that sapling" (Adabul Mufrad, Hadith: 479; Musnad Ahmad, Hadith: 3/173). In the above hadith, the Prophet (peace and blessings of Allah be upon him) has emphasized on tree plantation because it is possible to prevent air pollution by planting trees.

Water is another vital element of the environment, which covers nearly three quarters of the Earth's surface. Life cannot be imaginable without it. Water is a divine blessing from Allah is which essential for sustaining all forms of life. Allah enables the growth of crops through water and allows humans to earn their livelihood for generations. Water pollution is caused due to mixing of various chemical wastes from industrial plants, sewage and solid wastes from residential areas, and hazardous wastes from medical institutes. Additionally, fuel leaks from naval accidents, contaminate river or sea water. Beyond providing for basic needs, water is essential for transportation, energy generation, and climate control. The importance of water is emphasized many times in the Qur'an. Allah says in the Holy Qur'an: *"Do you not see that Allah has sent down rain from the sky and the earth becomes green? Indeed, Allah is Subtle and Acquainted"* (Kementrian Agama Republik Indonesia, 2019). Allah says in the Holy Quran: *"Have those who disbelieved not considered that the heavens and the earth were a joined entity, and We separated them and made from water every living thing? Then will they not believe?"* (Kementrian Agama Republik Indonesia, 2019).

These verses prove that water is a vital element for life, farming and ecological balance. Yet human activities are destroying its balance and harmony. led to a shortage of pure and fresh water around the world which is now an alarming issue. In this context, Islam warns mankind to ensure proper use of water so that this natural resource is properly preserved. From these instructions in the Qur'an and Hadith, people can understand the importance of water conservation. By following these teachings, people can understand the value of water and take necessary steps to prevent its wastage.

Soil or Land is an important element of the environment and generally refers to the solid

surface of the Earth. There are various types of lands, including fertile lands, forests, hills and mountains, unused lands, deserts, wetland, etc. However, the rapid industrial development and the discharge chemical waste into the land or water have led to serious contamination. Polluted water mixes with the soil and causes quality damage and reducing its productivity, which threatens both the environment and human livelihood. As every other element, soil is also vital which needs to be preserved and the Holy Qur'an emphasizes on this. Allah also says, *"And in the earth are tracts side by side, and vineyards and ploughed land of corn, and date-palms like and unlike-cornfields which are watered with the same water"* (Kementerian Agama, 2007).

This demonstrates the variety and importance of land as a food source. It is said in the Holy Qur'an: *"And indeed we have honored the children of Adam, and we have carried them in the land and the sea, and we have provided them with good things, we have bestowed special favor on them above many of those whom we have created"* (Kementerian Agama, 2007).

Islam has always instructed to keep the land and soil clean, so that at the time of scarcity, anyone can clean soil for tayammum - a method of purification using soil instead of water for prayer.

Trees play a vital role in maintaining the balance of the environment. They serve as a habitat for animals and birds. Oxygen is essential for the survival of all living being, which is produced by trees. Without plants, the existence of many animal species would be unimaginable. Moreover, trees are immensely important in human daily life. The Prophet Muhammad (peace and blessings of Allah be upon him) said: *"If a bird, a man or an animal eats from a grain or a tree planted by a Muslim, that person will be rewarded"* (Bukhari, Hadith: 2320, Muslim, Hadith: 1583/12). This hadith is further clarified in another hadith, *"A person who plants a tree is patient in caring for and preserving it until it bears fruit and Allah will give him goodness in return for every fruit that is lost."* (Musnad Ahmad: 1802, n.d.). The Prophet not only instructed us to plant trees but also practiced it himself. Every tree recites the Tasbeeh of Allah, so the Prophet (peace and blessings of Allah be upon him) said: *"Whoever cuts down a tree unnecessarily [a tree that into the fire]"* (Bayhaqi, Hadith: 8/140, n.d.).

The teachings of the Hadith and Qur'an proves that trees are the best friend of nature and environment. Therefore, it is necessary to take conscious initiatives to plant trees for the welfare of environment and human race without indiscriminately

Environmental awareness and the conservation of natural resources are deeply rooted in Islamic beliefs. As representatives of Allah on this earth, it is the responsibility of mankind to use natural resources efficiently. Natural resources need to be used sparingly to prevent overconsumption and invent new methods and equipment that can be used to produce more energy while using fewer natural resources.

4.2. Expert Opinion on The Role of Islamic Law in Environmental Conservation

Opinions and insights were gathered through Focus Group Discussions (FGDs), Key Information Interviews (KIIs) and Questioner Surveys, Environmentalists and Muslim scholars on the effectiveness and practical relevance of Islamic principles in promoting in environmental protection. The survey included 150 environmentalists and 150 Muslim scholars. The majority of the participants agreed on the concept of Islamic teaching can significantly accelerate the efforts to protect our environment. The detailed questionnaire overview during the survey are presented in Appendix-1 & 2.

Chi-Square Test

This study presents the results of a Chi-Square test for independence conducted to evaluate the association between adherence to Islamic laws and perceived environmental conservation effectiveness. The analysis is based on questionnaire responses collected from Environmental Specialists and Muslim scholars.

The hypotheses of the test were:

- a. **Null Hypothesis (H_0):** There is no association between adherence to Islamic laws and perceived environmental conservation effectiveness.
- b. **Alternative Hypothesis (H_1):** There is an association between adherence to Islamic laws and perceived environmental conservation effectiveness.

Two sets of questionnaire data were analyzed:

- a. **Environmental Specialists (Appendix 1):** Responses to 11 questions regarding

the effectiveness of Islamic guidelines for environmental conservation.

- b. **Muslim scholars (Appendix 2):** Responses to 9 questions focusing on the religious and theoretical framework for environmental protection in Islam.

The total responses for each group were categorized as "Yes," "No," or "Others."

The Chi-Square values were determined for degrees of freedom, (df) = 1 at two significance levels:

$\alpha=0.05$: **3.84**

$\alpha=0.01$: **6.63**

These values serve as thresholds to determine whether the null hypothesis can be rejected.

Here we can get,

a. Environmental Specialists (Appendix 1)

The Chi-Square values for the responses were calculated and compared to the critical values. The results are summarized below:

Question	Chi-Square Value	Significant at $\alpha=0.05$	Significant at $\alpha=0.01$
1	2.40	No	No
2	22.23	Yes	Yes
3	1.70	No	No
4	22.23	Yes	Yes
5	3.21	No	No
6	10.33	Yes	Yes
7	159.96	Yes	Yes
8	9.48	Yes	Yes
9	5.11	Yes	No
10	22.23	Yes	Yes
11	10.33	Yes	Yes

Table 1: Summary of the results of Chi Square Values for the responses of Environmental Specialists (Appendix 1)

b. Muslim scholars (Appendix 2)

The Chi-Square values for Muslim scholars were overwhelmingly significant for all questions. The results are summarized below:

Question	Chi-Square Value	Significant at $\alpha=0.05$	Significant at $\alpha=0.01$
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1	35.25	Yes	Yes
2	35.25	Yes	Yes
3	35.25	Yes	Yes
4	537.48	Yes	Yes
5	35.25	Yes	Yes
6	35.25	Yes	Yes
7	35.25	Yes	Yes
8	317.84	Yes	Yes
9	26.56	Yes	Yes

Table 2: Summary of the results of Chi Square Values for the responses of Muslim scholars (Appendix 2)

The analysis reveals the following insights:

a) Environmental Specialists:

1. A significant association was found for most of the questions, indicating strong agreement on the role of Islamic teachings in environmental conservation.
2. Questions 1, 3, and 5 did not yield significant results, suggesting variability in perceptions regarding specific guidelines of Islam in environmental protection.
3. Questions 2, 4, 6, 7, 10, and 11 showed strong significance, reflecting widespread agreement among specialists on key principles like cleanliness, resource conservation, and modern compatibility.

b) Muslim scholars:

1. All questions showed significant results, with several questions yielding extremely high Chi-Square values.
2. Question 4, which asked about issuing fatwas on environmental issues, had the highest Chi-Square value (537.48), highlighting a strong divergence between issuing fatwas and general agreement with Islamic principles.
3. The results underline a strong belief among Muslim scholars that Islamic laws and guidelines are effective for environmental conservation.

The results provide evidence of a significant association between adherence to Islamic laws and perceived environmental

conservation effectiveness for both Environmental Specialists and Muslim scholars.

- a. Environmental Specialists expressed varying levels of agreement, with noticeable difference in perceptions for specific questions.
- b. Muslim scholars exhibited uniform agreement, emphasizing the compatibility of Islamic teachings with modern environmental conservation practices.

This analysis suggests that integrating Islamic principles could be a meaningful approach to environmental policy-making and awareness campaigns, especially in Islamic contexts. However, further study could explore the specific gaps in perceptions noted among Environmental Specialists.

3.2.1 Opinion of Environmental Specialist

A total of 11 questionnaires were distributed using various methods such as email sending, phone calls, focus-group discussion, and interviews. Responses were collected from 150 participants (Yes, No, and Others etc.) environmental awareness, concerns, and the level of commitment to environmental protection. The data collected through the questionnaire were analyzed using frequency counts. In other words, the responses were combined together to find the maximum frequency of occurrence (i.e. the number of times a particular response has passed). The measurements of these responses to the questions are presented as percentages and visualized using bar charts summarizing opinion levels of all the respondents in environmental specialist are shown in Figure 1:

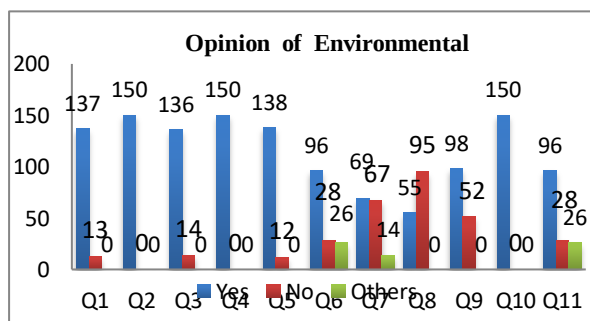


Figure 1: Summary of opinion levels of Environmental Specialists

Figure 1 shows of the questions surveyor asked to environmentalists about environmental conservation, which have (Appendix-1), received positive responses with a consensus rate of 80%.

Figure 2 received positive responses summarizes the opinion levels of all the respondents in Muslim Scholars is shown below:

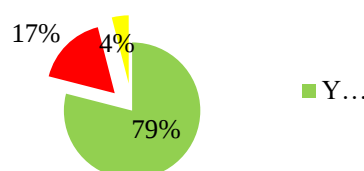


Figure 2: Percentage of Opinion

Figure 2 indicates that 77% of the respondents agreed with survey question that Islamic rules can help protecting the environment, yet 19% of the participants disagreed with the Islamic rules could protect the environment properly, and 4% provided alternative opinions.

A study of the above-mentioned survey shows Islamic environmental principles, if followed properly, can play an important role in the protection of the environment.

During the survey, environmentalists were given the opportunity to make spontaneous comments on what needs to be done to protect the environment in the context of Bangladesh. The following is a summary of the important comments made by environmentalists are summarized below.

- a. Shift to incentive-based enforcement of environmental laws.
- b. Mass awareness and proper implementation of existing environmental laws and regulations.

Encourage environmental action at both personal and family levels.

4.2.2. Opinion of Muslim scholars

A total of 150 Islamic thinkers participated in the survey by responding to 9 key questions regarding environmental preservation based on Qur'anic and Hadith teachings. In contrast to questionnaire mentioned in Appendix 2, most of them had a positive 'yes', as can be seen in the following figure (Figure 3). This

graph chart summarizes the opinion levels of all the respondent's Muslim scholars.

Figure 3: Summary of opinion levels of Muslim scholars

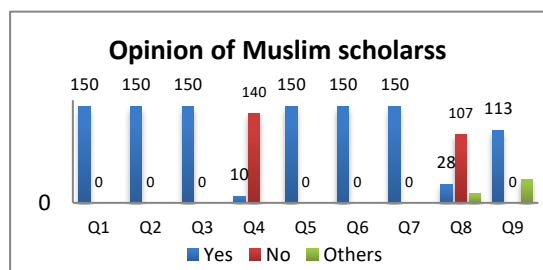


Figure 3 represents the opinion of Muslim scholars. According to the questionnaire survey, it appears that all Muslim scholars agree that Islam emphasizes the prevention of waste and pollution of the environment. It also considers that destroying the environment is a punishable offense. In addition, it is known that the imams of the mosques, Muslim scholars and any religious organization have not taken any awareness activities to implement these provisions of the Qur'an and Hadith to protect the environment. If awareness activities carried out, explaining the consequences to the people, it would lead to widespread awareness among the people and play an important role in protecting the environment.

The answers from the Islamic thinkers clearly indicate that the Qur'an and Hadith provide guidelines for preserving the beauty of the environment. Allah says in the holy Quran *"As for the earth, we spread it out and placed upon its firm mountains, and caused everything to grow there in perfect balance. And in it I have created a means of sustenance for you and others, whom you do not give sustenance to. "Rizik" has no means of reserve that we do not hold, only to bring it to the right measure. We provide clean air, and send down rain from the firmament for your drink. It is not you who hold its reserves"* (Kementeriaan Agama, 2007). This verse reflects the balance in the environment and how it is a source of sustenance for all the living beings. Plants, houses, soil, water, air, animals, livestock, roads, rivers, mountains, vehicles, factories, etc. comprises the environment. All these are the best blessings of Almighty Allah. However, most of the scholars have not directly addressed the role of Islam in protecting the environment. They showed indifference

regarding this correlation between Islam and Environmental conversation. According to the survey results only 16% of Islamic thinkers reported that Islamic organizations in Bangladesh are playing a significant role in environmental protection. "Islamic Foundation Bangladesh" an Autonomous body under the Ministry of Religious Affairs of Government of Bangladesh, which only promotes environmental conservation by incorporating a single session in their Imam training curriculum including some literatures provide them with a booklet.

4.2.3. Percentage of The Best Way to Manage Waste for Environmental Conservation

A questionnaire survey was also done to reveal whether environmental conservation can be done by introducing the 4R strategy (Reduce, Reuse, Recycle and Recover). The graph chart (Figure 4) summarizes the percentage levels of all the respondents in environmental specialist are given below:

Figure 4 summarizes the percentage levels of all the respondents in environmental specialist are given below:

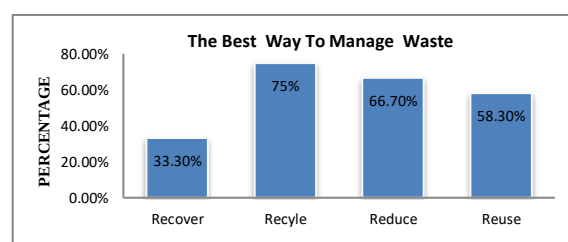


Figure 4: Introducing 4R to Manage Waste for Environmental Conservation

Figure 4 regarding the preferred waste management strategies based on the 4R (Recycle, Reduce, Reuse, Recover) approach:

- Recycle:** 75% of respondents supported recycling as a method for environmental conservation.
- Reduce:** 66.75% favored reduction of waste generation at the source.
- Reuse:** 58.3% expressed support for reusing materials to minimize waste.
- Recover:** 33.3% endorsed recovery of materials or energy from waste.

These results indicate strong support for the 4R approach—especially **recycling and reduction**—as effective strategies for conserving the environment through waste management.

Large portions of non-hazardous inorganic waste are reused and recycled by the inhabitants at the generating points. NGOs and Community Based Organizations (CBOs) offer door-to-door collection services and segregate the wastes for reusing them without processing. The residents store their daily waste in a plastic or metal bin either within their home or on their premises to supply them to the waste collectors. During their collections, the collectors keep the waste in a single chamber van to separate the useable and recyclable wastes, such as clothing, plastic products, and scrap metal, in hanging sacks behind the van, which are then sold in the informal sector recyclers. NGOs working in waste collection provide the collected wastes in composting plants to produce compost for the market sale (Ashikuzzaman & Howlader, 2020).

Although Islam does not directly address waste management system but the Islamic statement regarding waste management encourages to follow 4R strategy. Regarding reuse, the Prophet (peace and blessings of Allah be upon him) said: *"When something falls out of your kitchen utensils, pick it up and eat it clean, don't leave it to the devil"* (Abu Dawood, H. 3845, n.d.).

Islam also promotes recycling process, the Holy Qur'an says *"It is He Who has brought into being gardens, the cultivated and the wild, and date-palms, and fields with produce of all kinds, and olives and pomegranates, similar (in kind) and variegated. Eat of their fruit in season, but give (the poor) their due on harvest day. And do not waste, for God does not love the wasteful."* (Kementerian Agama, 2007).

Furthermore, Islam teaches against being wasteful. In chapter 7, verse 31, the Qur'an states *"eat and drink: But waste not by excess, for Allah loveth not the wasters."* The Qur'an praises the behavior of *"those who, when they spend, are not extravagant and not niggardly, but hold a just (balance) between those (extremes)"* (Kementerian Agama, 2007).

5. Conclusion

At present, in the universal view of global environmental crisis, Islam has a very particular offer to the world to avoid this multifaceted crisis. It is clear that the environmental crisis is not an immoral one. The paper discussed that Islam provides very

effective ethical principles to deal with the environmental catastrophe. Although the word "environment" is not clearly mentioned in the Quran, issues related to the environment appear 155 times in various surahs of the Quran. There are many teachings about the environment in the Qur'an. It is estimated that there are 750 verses which refer to various aspects of the environment and the relationship between humans and the environment.

The case study at Shantikunjo Housing Estate in Mirpur 1 explored how Islamic principles of resource stewardship could help reduce consumption and waste. By educating residents on Islamic teachings regarding conservation, including reducing gas, electricity, and water usage, as well as minimizing solid waste, the community showed significant improvements. Gas consumption decreased by 57%, water usage was reduced by 23%, and solid waste dropped by up to 40%. This initiative demonstrated that integrating faith-based conservation strategies can effectively promote sustainable living and could be applied to other communities for broader impact.

The study clearly demonstrates that by following Islamic rules properly, it is possible to play an important role in protecting the environment. Most of the environmentalists who participating in the survey believe that if people adhere to the rules of Islam regarding environmental protection, it significantly reduces the harmful effects on the environment and aid in its conservation. And similarly, after analyzing the opinions and information provided by Islamic thinkers, it appears that to preserving the environment is achievable by following the rules and regulations of Islam properly.

An important way to protect the environment is to preserve its elements such as - water, soil, air, sound, animals and plants in a proper manner. The basic texts of Islam, including the Qur'an and the Hadith, provide various ways to preserve these elements of the environment which are discussed in the results chapter. These teaching demonstrates that Islam attaches great importance to the protection of the environment. An analysis of a survey conducted among environmentalists found that approximately 94% believed it is possible to protect the environment in accordance with Islamic rules. Furthermore, all Islamic thinkers

have agreed that the using the environment and its elements in accordance with the guidance of the Qur'an and Hadith narrations will play an important role in preserving the environment.

The issue of the environment is not only the issue for scholars or other single departments. All bodies of the GoB should response simultaneously for the greater causes of the environment. Environmental sustainability depends not only on a single department rather it depends on combined collective effort of the Government of Bangladesh, Non-Governmental Organizations, Common People's Participation, Religious Institutions, Scholars & Leaders, Civil Society, Electronic, Print & social media and so on.

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