**Islam and the Environmental Conservation: Impact and Government Initiative to Mitigating the Natural Disaster in Indonesia**

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**Abstract:** Indonesia is a very vulnerable country to disaster threats. Its territory consists of land and sea stretching on the equator line which potentially causes natural disasters. Natural disasters repeatedly come annually such as tsunamis, earthquakes, flash floods, landslides, and volcano eruptions. The objective of this study is to discover a consideration in planning disaster mitigation by reviewing previous disasters and by highlighting the Islamic views which contributes to preserving nature in terms of before the disaster, during the disaster, and post-disaster. The result of this study expectedly promotes a recommendation in deciding due to disaster mitigation. Furthermore, this study also hoped to give a role model of how Islamic followers manage the environment even during a disaster. This study employed a descriptive method by secondary data approach and applying the conceptual and comparative approach. The result of the study revealed the orientation of the objective of disaster mitigation regarding the process of drafting the developmental plan in the local area, city, and disaster mitigation. This study promotes a general image to the public about the steps of making the decision and policies by the government due to disaster mitigation and also relevant measures given to the people who are affected by the disaster. In addition, this study showed the religious concept of Islam which cares about natural conservation where the disaster is considered an alert for each Muslim to do better in the coming time.

***Keywords: Environment, Conservation, Islam***

**Abstrak:** Indonesia merupakan negara yang sangat rawan akan terjadinya bencana alam. Wilayah yang terdiri dari lautan dan daratan serta keberadaannya yang terletak pada garis khatulistiwa menjadikan indonesia sangat rentan terhadap bencana alam. Mulai dari tsunami, gempa bumi, banjir bandang, tanah longsor dan letusan gunung merapi kerap menjadi rutinitas yang hampir selalu terulang setiap tahunnya. Tujuan dari penelitian ini adalah untuk menemukan pertimbangan dalam perencanaan mitigasi bencana dengan melihat bencana-bencana yang telah terjadi sebelumnya dan Islam berkontribusi dalam merawat lingkungan sebelum terjadi bencana, saat terjadi bencana dan setelah kejadian bencana alam. Hasil penelitian ini dapat digunakan dalam pengambilan keputusan terkait penanggulangan bencana alam dan juga menjadi role model bagaimana muslim mengelola lingkungannya bahkan saat terjadi bencana alam. Metodologi penelitian yang digunakan adalah metode deskriptif dengan pendekatan data sekunder dan penerapan pendekatan konseptual serta pendekatan komparatif. Hasil dari penelitian ini menunjukkan bahwa orientasi tujuan mitigasi bencana terkait proses penyusunan rencana pembangunan di daerah dan kota serta penanggulangan bencana. Penelitian ini juga memberikan gambaran umum kepada masyarakat mengenai tahapan pengambilan keputusan kebijakan pemerintah dalam penanggulangan bencana dan antisipasi bencana bagi masyarakat yang terkena dampak bencana. Selanjutnya, penelitian ini juga menunjukkan bahwa konsep beragama dalam Islam sangat peduli terhadap lingkungan sehingga bencana alam yang terjadi dapat dimaknai sebagai ujian maupun teguran yang harus menjadi intropeksi setiap muslim untuk terus berbenah dan semakin baik kedepannya.

***Kata Kunci: Lingkungan, Perlindungan, Islam***

**Introduction**

Indonesia is a very large country with an area of 1.905 million km2 and a 273,8 million population consisting of various ethnicities, cultures, and beliefs. Those have driven Indonesia into a presidential system by implementing the Acts of 1945 and *Pancasila* (the five principles) as the national ideology. The reality is based on the regulation number 12 the year of 2011 about the making the regulation of acts of the Republic of Indonesia with type and hierarchies as follows; Acts of the Republic of Indonesia 1945, MPR decree, regulations, president regulation, and regulations of province and regulation of regency/city.[[1]](#footnote-1)

Indonesia consists of thousands of islands. It is rich in human and natural resources. However, many threats are ready to hit it (Indonesia) such as forest fires, floods caused by unlicensed development, environmental pollution, and the like. Natural disasters and disasters made by human beings have a serious and dangerous impact on society and the environment. The uniqueness of the geographical characteristics of Indonesia has given some rich and prospective natural resources. It is also popularly known as a maritime country due to its ownership of thousands of islands, beautiful beaches, and fertile lands. Furthermore, it also has a vast of mine resources such as oil, gas, coal, gold, and so on. In addition, the huge diversity of flora is astonishing which is powered by a very large area of rainforest and some endemic plants and species live there. Nevertheless, the riches of the Indonesian natural resources also trigger some challenges for utilization. Unsustainable utilization, illegal mining, deforestation, and other natural destructions significantly stimulate a long-term negative effect on the society and surrounding ecosystem.[[2]](#footnote-2) Besides, the high frequency of natural disasters in Indonesia also hit the record of loss and damages.

Natural disasters just like earthquakes, tsunamis, volcano eruptions, and floods are hitting mostly the entire territory of Indonesia with high frequency. The diversity of magnitudes and disaster frequency directly tell everyone about the critical location of Indonesia within the pacific ring of Fire where the tectonic plates drive into the high frequency of seismic activities.[[3]](#footnote-3) Moreover, Indonesia is also in the position of threatened by the storm and typhoon, notably around the area of the seashore. Natural disaster destructs either physical things (infrastructures and environments) or social and psychological loss. Disaster victims always suffer heavy trauma, losing wealth and jobs. Disaster recovery needs strong cooperation, synergy, and great effort from the government, organizations, and the public. In the improvement of facing natural disasters, Indonesia gradually increases the quality of mitigation measures, responses, and recovery. Government and relevant institutions work together with the local and international community to strengthen the system of early warning on disaster, infrastructure for responding to the disaster, and recovery programs. Furthermore, education and awareness of society on disaster mitigation are the main focus to improve due to minimizing the negative impact of the disaster.

The government of Indonesia has made some regulations for measures in response to the disaster hit. It is in line with regulation Number 24 in the year 2007 based on the initiative and commitment of the government to issue the relevant and necessary regulations for disaster mitigation.[[4]](#footnote-4) The direction of the idea of disaster recovery transforms from the approach of response to emergency into more preventive by prioritizing risk mitigation. The effort of disaster management has been made through the *Pembangunan Jangka Menengah Nasional* (RPJMN or National Middle term development).[[5]](#footnote-5) From 2015 to 2019, disaster mitigation and living space stabilization transform into the aspect of the development plan. The central dan regional government have the authority to organize and handle disaster management, including the making of the plan. The function of directed plan and development is to increase the capacity and capability to handle the disaster, including handling post-disaster. The goal of the plan of disaster management is to protect the community, reduce the loss, and recover the surrounding conditions which are damaged by the disaster.

Moreover, the Government together with the community work in line with other parties (local and international agencies and organizations) to strengthen the system of early alert, improve the infrastructure of disaster responses, and increase society’s awareness of disaster mitigation. The measures the government takes for disaster mitigation are based on the knowledge and experiences of previous disasters and based on systematically arranged plans to counter the risk of disaster in Indonesia.

Acts number 24 the year of 2007 disaster mitigation defines a disaster as a serial threatening occurrence by the factors of nature, non-nature, and humans which potentially leads to casualties, environmental destruction, wealth loss, and psychological effects.[[6]](#footnote-6) Through the issued acts, some things are introduced, most importantly, about the planning and funding for disaster mitigation. However, according to Hidayah in the autonomous era, most of the regions are not noticing yet about the importance of disaster mitigation. In this context, the acts have brought some essential changes. *First,* the transformation of the paradigm on disaster mitigation more focuses on pre-disaster or minimizing the risk. Disaster mitigation is much more proactive, not reactive. *Second,* the government prioritizes much more on the people’s participation in disaster mitigation than dominating or controlling. The community is expected to actively involving the process of disaster mitigation. *Third,* the domain of disaster mitigation is no longer under the authority of the central government, but it has belonged to regions or has been decentralized. This regulation includes the scheme of budgeting and the process of deciding on public policy due to disaster management.[[7]](#footnote-7)

Therefore, the acts number 24 the year of 2007 has brought an essential transformation within the approach and responsibility of disaster mitigation which involves the people and local government’s participation in preventive and proactive measures in reducing the disaster risks.

To reach the objective of the impact of disaster mitigation, there are some early measures needed. It calls for the hard work of the government from the central government to the local government level and cooperation with the disaster-affected community. This effort is to minimize the worse impact of disaster and it is combined with the developmental program. The decrease of disaster effects is done when the disaster does not come yet. People’s losses are reduced through the development of the central and regional governments.

The government arranges the plan of disaster mitigation by several steps namely initiative, commitment, identification of risk disaster, behavior control, working distribution, and determining the domain of the authority and available resources. In planning, it is important to supervise and revise the program to achieve the expected result and at the same to minimize errors during the implementation. However, at the local level, the spirit of disaster mitigation in terms of early warning and pre-disaster mitigation is not well-paid attention to. This condition has been shown in the context of disaster mitigation and disaster recovery for post-tsunami in Aceh. Hence, it is urgently needed a particular concern and improvement which emphasizes the planning for regional development as a priority for disaster mitigation. To succeed, it requires a sufficient budget to fund disaster mitigation, and also involve all parties during the process of planning, implementation, and monitoring the programs of disaster mitigation to achieve the standard and expected objective.

From the Islamic viewpoint, conserving and protecting the nature and environment have a vast deal. Islamic religion teaches its followers to become a *caliphate* (manager) of the earth and is responsible to care for, utilize, maintain, and protect everything on it. Some Islamic principles dealing with environmental conservation, are *Tawhid* namely a concept of the oneness of God in Islam that teaches humankind that all universes are created by Allah, and human as Allah’s slave and creature has a responsibility to conserve and take care of it. The next Islamic concept is *Amanah,* this concept reveals that Allah gives trust to humans to conserve and benefit the earth. To realize it, human is expected to be accountable and fair. *Balance and Muroqobah, is* a concept in Islam that teaches the importance of keeping the balance in the relationship between humans, nature, and God. Humans must have awareness and *muroqobah* (self-monitoring) on what they have done and the impacts on nature. *Prohibition for destruction:* Islam forbids the eradication or removal of certain things of nature and living creatures. Islam forbids people from destructing nature, taking more than needed, and behaving wastefully. *Wisdom and justice:* Islam pushes its followers to behave wisely and justly to manage and utilize natural resources. The use of natural resources must be wise, based on need, and not harm the public interest. *The prohibition of extravagance*: Islam teaches people to not be extravagant in using natural resources. The extravagance is considered an irresponsible deed and harms the environment and generations to come. *Hima* (forbidden land); this concept exists in Islamic teachings containing the management and protection of certain lands that have biodiversity and important ecology function. Those lands are guarded and forbidden to utilize due to realizing the natural conservation and ecosystem balance.

Islam emphasizes to its followers that conserving and protecting the nature and environment are considered important responsibilities. Allah the al-Mighty created humans as a caliphate on the surface of the earth with a specific task namely to manage, utilize and protect the nature and environment on earth fully responsible. Humans are given a trust (*amanah*) to ensure natural and environmental sustainability and certainly also inherit it to the next generation. Islam teaches the importance of keeping balance and orderliness on earth. People are prohibited from destructing or disturbing the natural ecosystem that is well-set and ordered by Allah. It is a critical principle in Islam to keep the balance among humans, nature, and other living creatures on earth.

Islam drives its followers to behave wisely and fair during interactions with nature. The use of natural resources must be realized wisely, not excessively, and not harm the public. Wasteful and behavior of extravagance in using natural resources are strongly prohibited in Islam. Allah al-Mighty has said in the Qur’an (Surah al-A’raf verse 7:31): “*Eat and drink and waste not by extravagance, certainly He (Allah) likes not those who waste by extravagance”.* The Qur’an implies that wasting natural resources is irresponsible action and harms nature and human beings.[[8]](#footnote-8)

Islam teaches humankind to understand and respect the harmonious relationship among all living creatures. Human is prohibited to do harm, destruct and torment living creatures for no reason. Protecting and conserving the environment are considered good deeds from the Islamic point of view. Allah al-Mighty gives bounties to those who conserve and protect the environment and maintain the ecosystem balance. Consequently, in the Islamic view, protecting and conserving the balance of nature and the environment are integrated good deeds and responsibilities for each Muslim. Understanding and practicing those values will automatically lead Muslims to be responsible to protect and conserve the nature and environment to realize the balance of what Allah al-Mighty wants.

**Results and Discussion**

1. **Disaster Mitigation and Policy Integration**

Policy integration for disaster mitigation is a process of unifying various policies, programs, and measures to reduce and anticipate the risk of a disaster comprehensively. The following is a paraphrase. Policy integration for disaster mitigation is an effort to combine various policies, programs, and measures to reduce the risk of disaster comprehensively.[[9]](#footnote-9) Disaster mitigation is a serial measure to do to minimize and avoid the negative impact of a disaster. The main objective of disaster mitigation is to protect human life, reduce material loss, and minimize the social and economic effects.

Policy integration, in the context of disaster mitigation, refers to the effort to synchronize some policies and programs that are related to disaster mitigation within a coordinated framework. Policy integration is promoted to stop the overlapping of policies and programs, maximize the synergy, and make sure effective collaboration among the stakeholders involved in succeeding disaster mitigation.

 The policy integration for disaster mitigation involves the coordination work style among the central government, local government, related institutions, social organizations, and private sectors. They are realized through serial steps namely planning, policy development, budgeting, program implementation, monitoring, and evaluation of disaster mitigation comprehensively. By implementing good policy integration, all efforts and resources can be optimized to reduce the risk of disaster effectively.

The policy integration the disaster mitigation also entangles an inter-sectors approach where various sectors such as infrastructure, health, education, environment, and others are working together to identify and reduce the disaster, this point guarantees that disaster mitigation is not only handled by one sector or one institution, but t needs the involvement and roles of all parties who have certain role and interest to protect people and environment from the disaster.

By the policy integration for disaster mitigation, it is expected that effective coordination is realized, optimal use of resources, and well directed and integrated program to remove the risk of the disaster. Those points will strengthen the community's resilience and minimize the negative impact of the disaster. Reducing the impact of the disaster is assumed an urgently needed measure to do continuously by an individual, group, community, and society to manage and mitigate all kinds of dangers and disasters. Mitigation is one of which to manage a disaster by involving the preparation in the previous time and an alert to reduce the impact and reduce the possibility of a disaster that threatens the society in a certain location. Furthermore, in mitigation, some measures are also must be applied such as evaluation, rehabilitation, reconstruction, and relevant and needed actions. Therefore, disaster mitigation must be carried out comprehensively by involving government and individuals in terms of before, during, and after the disaster hits through relevant and proper management and evaluation to fix the situation. This kind of analysis is purely connected to the aspect of the earth physically which is frequently associated with an analysis of disaster risk.

Act number 4 the year of 1982 about regulations of core management of living environment has ordered about the matter of environment in Indonesia.[[10]](#footnote-10) Two points are emphasized by this regulation. *First,* this regulation manages and determines the outline of the environment meanwhile the guidance and the detail of implementation of the regulation are issued through the regulation of implementation or the guidance of realization. *Second,* the regulation does not manage the environment comprehensively but only manages the aspect of management.

The principle of living environment has been managed by regulation Number 4 the year of 1982 which mentions the conservation of environmental ability based on harmony and balance to support sustainable development to increase the people’s prosperity. The goals of living environment management are as follows; (1) reaching the balance of the relationship between humans and the living environment as the main objective of human development in Indonesia, (2) Managing and controlling the use of resources wisely, (3) Driving the Indonesian people to be the manager of the living environment. (4) Applying the development with the environmental approach for the sake of the recent and upcoming generations, (5) Protecting the country from the uncontrollable activities that affect the damage, contamination, and destruction of the nature and environment.[[11]](#footnote-11) Chapter 1 verse (4) of Acts no.4 year of 1982 clearly explains that the ecosystem is a union consisting of all elements of living environments that affect one another comprehensively.[[12]](#footnote-12)

The living environment in Indonesia covers the living environment inside the territorial border of the Republic of Indonesia. Based on the general explanation of Act no. 4 the year of 1982, revealed that the living environment in the context of the ecology is limitless of the state territory borders or administrative/official territory. Nevertheless, when the living environment is in terms of its management, then the authority of the management must be clear. Consequently, the concept of the living environment in Indonesia is not only an ecology concept but also under the law and political dimension.

* 1. **Environmental Damage and Pollution.**

 Acts No. 4 year of 1982 differentiates between damage and pollution. Environmental pollution is a condition when inserting other living creatures, energy, substance, and any other components/elements into a certain environment, or the change or transformation of a certain environment caused by human activities, or a natural process that causes the change of quality of environment into certain lower level which causes the decrease of natural function as its previous existence. Moreover, environmental damage is an action causing a direct or indirect change to the environment.[[13]](#footnote-13)

1. Acts No. 11 the year of 1967 about the principles of mining resulting the harmony and balance in mining management in the mountain area. According to chapter 16 verse (1) UUPP, the mining business is not allowed to run its business in the covered area which is for the public interest, field, and defense building. The stakeholders of the mining business are obliged to restore the land to the previous condition to remove the probability of the source of disease and any other dangers for the surrounding community after the mining activities are over (Chapter 30 UUPP).
2. In the working area: Acts No. 14 the year of 1969 about the principle provision of workers at the working place. Chapter 9 UUTK states that each worker has the right to receive protection and guarantee on safety, health, morality, working appreciation, and proper treatment based on the values of human beings and religion. Furthermore, chapter 2 verse (1) regulation number 1 the year 1970 stated that work safety is applied for all working places either on land, underground, on the surface of the water, deep in the water, or the sky as far as inside of Indonesian territory.
3. In the industrial sector: the regulation number. 5 year in 1985 about the industry had been ratified. Based on Table 1, number 2, ‘industry’ refers to the economy and business that alter raw materials, half-finished products, and finished products into more valuable products. An entrepreneur is required to prevent and manage the disturbance and defilement of the environment during industrial activities. To do so, they must make a plan for emergencies that comprises steps for limiting, cleaning, and preventing the destruction and pollution of the environment due to releasing waste and dangerous materials.
	1. **Moral (*akhlak*), Ethic and Attitude in Environment Management.**

Based on etymology, the word ‘*akhlak*’ (in the Arabic language) or moral is derived from the word ‘*khuluq*’ which means moral, character, and behavior. The root of the word ‘*akhlak*’ is related to the word ‘*khaliq*’ (creator), ‘*makhluq*’ (creature), and ‘*khalq*’ (creation). The similarity of the root of the words indicates the concept of *akhlak* or moral depicting the inseparable relation between the will of god (*khaliq*) and the behavior of humans (*makhluq*). In terms of the semantics approach, it is understood that the meaning of the above statement is that someone’s behavior towards someone else and the surrounding environment will be considered to have good values of *akhlaq* when it is practiced based on the will of god (*khaliq*).[[14]](#footnote-14)

*Akhlaq* or moral is always identified as the norm of politeness. *Khuluq* refers to the image of the physical and psychological side of humans, including facial expressions, gestures, and entire physical looks. In Greek, the definition of *khuluq* is equivalent to the word ‘*ethico*’ and ‘*ethos*’, which refers to an attitude, habit, mental, and the tendency of the heart to do something. The word ‘*ethicos*’ later is well-known as ‘ethic’.

Based on the dictionary of *Al-Munjid,* the term ‘*khuluq*’ is defined as character, behavior, attitude, and habit. Moreover, the term ‘*akhlak*’ is defined as the knowledge or norm to understand human behavior and judge the deed whether it is good or bad and suitable with the applied norms and social order.[[15]](#footnote-15)

In consequence, *khuluq* or *akhlak* is a condition or character that is integrated into a person’s personality. From this point of view, various spontaneous responses and actions arise without thinking. *Akhlak* can be formulated as a knowledge that teaches humans to behave well and prevent them to do evil deeds concerning the relationship between God, humans, and the environment. Another term for *akhlak* is moral. Moral is derived from English language words namely ‘*moral*’, Latin language ‘*mores*’, and Dutch language ‘*moural*’ that refer to character, norm, and customary. Based on The Advanced Learners Dictionary of Current English, moral means the principles of correct or incorrect, good or evil, an ability to differentiate between right and wrong, and teachings about the good behavior of humans.

Moral also means something related to the good and bad of a human character. Moral also connects to the difference between good and bad. According to Hamzah Ya'qub, moral refers to the general concept and is acceptable as the human’s action that leads to the good and proper things to do. On that account, moral is determined by the standard of action that is acceptable to society or a certain social community. In addition, moral also has another term namely ethic. Ethic itself comes from the Greek ‘*ethos*’ which means habit and behavior. Philosophically, the essence of the meaning of those two terms (moral and ethic) can be differentiated. According to Frans Magnis Suseno, moral refers to teachings, guidance, and oral or written instruction about lifestyle and behavior so that humans can live much better. Meanwhile, ethics is philosophical and critical thoughts based on teachings and moral values. Accordingly, ethics can be considered as knowledge about morals and norms. Even each individual has his/her standard of moral, but not everyone needs to do critical thinking about morality which is part of the ethic domain.

The term moral and *akhlaq* have the same meaning namely human behavior either good or bad. Yet, there are some essential differences between those two terms in terms of the parameter of judging the good or bad on something, certainly on human behavior. The concept of moral, notably as it is developed by the Western philosophers in the Renaissance era, is the context of judging human behavior whether good or bad only based on mind and feeling. Moral is separable about good or bad things in the religious context. In other words, *akhlak* determines whether good or bad human behavior is logical and in line with religious teachings.

The environment is an integral part of human life that is a must to consider as a component of the respected, protected, and conserved ecosystem. The environment has intrinsic values. The existence of intrinsic values will navigate the behavior of people and affect the surrounding environment. Positive action will be able to ensure environmental conservation, meanwhile, the negative action will destruct it. This integrity pushes humans to be responsible when interacting with the surrounding nature. The environmental damage is caused by the anthropocentric perspective of people who assume that human is the center of the universe. In this perspective, nature and the environment will be assumed to be the object to exploit for fulfilling the needs of humans on earth.

From the Islamic perspective, humans and the environment have a strong relationship. Both are the creatures of Allah. Allah created the universe and its components, including human beings as the integral part of the universe. The balance and harmony of nature is the proof of the dignity and wisdom of Allah al-Mighty. In Islam, human is responsible to maintain the natural balance and harmony. Allah puts trust in humans to protect, explore, manage, and utilize the nature and environment wisely. It means that humans must keep the sustainability of nature by avoiding damage to it and at the same time utilizing the resources provided by nature fully responsible.

The continuity of the universe is inseparable from the relationship between humans and the environment. If one of the components is broken, it will lead to a negative effect on another component. For example, if the environment is broken due to illegal logging, water pollution, and also air pollution, these will affect human life, because they affect directly the health and prosperity of people in the world. In Islam, keeping the balance and harmony of nature is categorized as a responsibility as a caliphate of Allah on earth. This point insists humans behave well toward nature and treat all God’s creatures respectfully. Therefore, Islam teaches the importance of keeping a harmonious relationship between humans and the environment to realize common sustainability and prosperity.

Human has a dominant role in environmental change, either good or bad change. All changes in nature and the environment are influenced by human behavior. The Qur’an emphasizes that environmental destruction either on land or sea is caused by human deeds. The reason is that human is the main actor who exploits the nature and environment without taking into account natural sustainability and balance. In many cases, the actions of humans in exploiting and utilizing natural resources are not only for the needs of human life, but also are influenced by the factors such as economic desire, power, and uncontrollable desire compliance. Human always prioritizes economic profit and personal power without considering the negative effect on the nature and environment they exploited. Consequently, human destruct the nature and environment through excessive exploitation of natural resources, environmental pollution, habitat damage, and extinction of certain species. This reality threatens the sustainability and balance of nature.

 From the Islamic perspective, human has the responsibility to protect and conserve the nature and environment as the role of the caliphate of Allah on planet Earth. Human is reminded to treat nature responsibly, wisely, and respectfully. Human activities on natural and environmental exploration and utilization must be based on the principles of morality and ethic comprising the values of sustainability, justice, and the balance of nature.

According to Quraisy Shihab,[[16]](#footnote-16) the caliphate has three elements that are related to each other and there is a fourth element outside of it, that strongly determines the meaning of the caliphate from the viewpoint of The Qur’an. The first three elements are as follows:

1. Human, in this context, is acting as the caliphate. Human as a caliphate has a role and responsibility to be manager or representative of Allah on earth.
2. The universe, which is stated by Allah as earth. The universe and everything in it such as the environment, flora, fauna, and the ecosystem in it.
3. The relationship between humans and the universe and everything in it, including the relationship between humans and other humans. This relationship involves the tasks of the caliphate or the tasks of management and maintenance of the environment which are given to human beings.

This understanding is in line with the interpretation of *Tahaba’ taba’i* who interprets the term *caliphate* in the verse of the Qur’an as has not individual politic connotation but communal cosmology. In other words, Adam in this context is not an individual but symbolizes all humans.[[17]](#footnote-17) Accordingly, the concept of the caliphate from the perspective of the Qur’an illustrates the strong relationship between humans, the universe, and human responsibility as the manager who is responsible for managing and utilizing the universe and everything in it. The caliphate is not only related to the dimension of individual politics but also related to communal and cosmology as the role of humans as the manager and conserver of the universe.

Passmore, as cited by Sudarminta[[18]](#footnote-18) stated that the appearance of the issue of the environment is inseparable from the perspective of a certain cosmology which is in reality pushes into an exploitative attitude toward nature. Consequently, the transformation of environmental ethics needs a basic change from the cosmology perspective which results from an exploitative attitude toward nature toward the friendly and appreciative perspective of nature. The perspective of cosmology illustrates our understanding of nature, the universe, the human place, and the relationship between humans and nature. If the cosmological perspective is based on nature exploitation where nature is considered as resources to exploit with maximum level for human interest without considering the long-term consequences, then the attitude of t tends to be exploitative.

However, to transform the environmental ethic much better, it needs a fundamental change in our cosmological perspective.

The friendly and appreciative perspective of nature acknowledges that nature has intrinsic values that must be respected, protected, and appreciated. Nature is not only an object to be exploited, but it also has diverse values, ecosystem balance, and beauty to be respected and conserved. The transformation in cosmological perspective is expected to trigger a wiser attitude to treat the nature and living environment, The environmental ethic changes our mindset, recognizing the relation between humans and nature, and also respecting and maintaining the sustainability of nature for the sake of human prosperity and the generation to come.

There are two essential teachings that all Muslims must pay attention to concerning environmental ethics. *First*:the concept of ‘*rabbul ‘alamin*’ or God of the universe is not only God for a certain community. In this perspective, all living creatures before God are considered equal. *Second:* the concept of ‘*rahmatin lil ‘alamin*’ or blessing for the universe. It means that human is given the responsibility to apply their attitude based on blessing values concerning nature and the environment. Human is expected to respond by blessing values to the universe. In this context, human behavior must protect and conserve the nature and environment, not destroy it.[[19]](#footnote-19)

 Good understanding of the meaning of ‘*rabbul ‘alamin*’ and ‘*rahmatan lil’alamin*’, all Muslims are expected to avoid destructive behaviors toward the environment. On the contrary, they will do everything under the frame of blessing the universe, keeping nature sustainable, and living with nature in balance. With this perspective, the ethic of the environment becomes an integral part of the belief and religious practices of Muslims. [[20]](#footnote-20)

According to Muhammad Idrus, there are three phases in practicing the religion that is becoming principles for environmental ethics in the Islamic perspective:[[21]](#footnote-21)

*First; the* phase of *ta'abbud* (worship). Protecting the environment is considered as the implementation of obedience to Allah because protecting the environment and nature is part of human’s responsibility as a caliphate. Even, in the context of *fiqh,* keeping natural and environmental conservation and balance is considered an obligation that is clearly stated in the Qur’an and hadith of the Prophet Muhammad (peace be upon him). According to Ali Yafie, the issue of the environment is classified into chapters of *jinayat* (crime), in consequence, the destruction activities on nature and environment can be fined by a certain sanction or punishment.

*Second; the* phase of *ta'aqquli* (rationality). The order to protect the environment logically has an understandable objective. The environment is the place to live all living creatures. The environment has been created by Allah with balance, harmony, and interrelation. When imbalance happens due to nature and environmental destruction done by humans, then disaster inevitably will hit humans and all living creatures that live in it.

*Third:* phase of *takhalluq* (inner attitude). Conserving the environment must become the character, and habit of each individual. Natural conservation will be more beautiful when integrated into daily habits and activities. Therefore, the balance and preservation of nature will be existing without law reinforcement and any other external motivation.

 By following those three phases, namely *ta'abbud, ta'aqquli,* and *takhalluq*, Islamic followers are expected to respect and protect the environment as an integral part of their religious practices. In this view, protecting the environment is not only an individual’s task but also a common responsibility to achieve balance and conservation of nature which is given by Allah.

 These following principles can be guidance and instruction for humans to behave and interact with nature, either by direct behavior toward nature or behavior toward other humans that have an impact on nature.

1. Respect for nature

Respecting nature is a primary principle that insists humans as an integral part of the universe to acknowledge the values of life, just like within the social community, each individual has the responsibility to respect the common lifestyle and keep social harmony. In the ecology community, each individual must respect and appreciate life and must keep a commitment to keep the cohesiveness and integrity of family members namely the nature where humans live. Just like in a family, each family member has a responsibility to make sure the existence, prosperity, and cleanliness of the family. So each member of the ecology community has the responsibility to respect, appreciate, and protect nature as a home for every living creature.[[22]](#footnote-22)

1. Moral Responsibility For Nature

Moral responsibility for nature is a consequence of the principles of respecting nature as mentioned in the previous discussion. As a caliphate or the one who is in charge of earth management and utilization where human ontologically is an integral part of nature. Consequently, human has a vast responsibility to the universe for making sure the existence and preservation of the nature and environment. Each element and entity in the universe is created by God for a reason and a certain objective, despite whether the objective is for human beings or not. Therefore, as an integral part of the universe, humans must have responsibility for maintaining and protecting it.[[23]](#footnote-23)

1. Cosmic Solidarity

The principle of solidarity is the relevant principle with the two moral principles before. As those two principles, the principle of solidarity appears because human is an integral part of the universe. Moreover, in the perspective of eco-feminism, human is given an equal position with nature and all living creatures in it, This awareness stimulates the feeling of solidarity within human namely a feeling of unity and responsible each other for nature and other living creatures.[[24]](#footnote-24)

1. The Principle of Affection and Caring for Nature

As an ecological community member, human is triggered to have love, and affection, and will conservation to the universe and living creatures n it without dominance and discrimination. Affection and care arise when human realizes that as an ecological community, each living creature has a right to be protected, guarded, cared for, and not harmed.[[25]](#footnote-25)

The general condition of humans depends on the surrounding nature and environment. The environment provides natural resources for daily needs. Natural resources such as water, air, and soil have a vital role to fulfill human necessities. Therefore, a healthy environment depends on how wealthy and prosperous a human being is and also good environment support. The balance and orderliness between humans and the environment will create a healthy and sustainable environment.

The nature crisis at the recent time is an effect of managing and exploitation of the environment and nature by humans without applying the principles of ethics. This indicates that the ecological crisis that human faces has root in ethical and moral crisis. In this context, the issue of environment and nature is not only restricted to the technical and material domain but also spread into further moral dimensions. When people ignore the values of ethics in the interaction with nature, such as neglecting responsibility, justice, and appreciation of sustainable nature, then the crisis is even worse. Therefore, the solution for the environmental crisis is not sufficient to be handled by only a technical approach, it needs a transformation of human behavior and awareness based on the ethical principles of the environment.

People always ignore the norms in life that manage the relationship between humans and nature, They tend to replace those norms with norms that prioritize their interests. In the modern era, people always interact with nature without considering moral norms that are supposed to direct their activities. They exploit nature without any responsibility and innocence. Consequently, the quality of natural resources decreases, including the loss of some types of species on earth. Finally, the quality of the nature and environment degrades completely. Pollution and destruction of the nature and environment become significant problems that affect directly the daily life of human beings.

**Conclusion**

The Islamic teachings in the Qur’an and hadith show great attention to the relationship between humans and nature/environment. The religious ethic within the Islamic teachings drives humans to conserve and protect nature continuously. This is aimed to ensure that the natural resources are well and properly protected to support human life. Islamic teaching teaches the importance of sustainability and balance in utilizing and exploiting natural resources and ordering people to be responsible for what they do regarding the effect on the nature and environment. These principles navigate people to behave wisely, love nature, and make sure of the sustainability of nature for the sake of human life.

There are many acts and regulations managing and monitoring the nature and environment in Indonesia. However, those acts and regulations are not fully effective to apply. The unplanned and un-integrated living environmental management cause damage and pollution to nature and the environment. To solve this issue, the principles of Islamic law become the foundation for social power activities for ensuring a regular, balanced, and harmonious life. Moreover, it is also used to prevent and stop pollution and destruction of nature which is causing imbalance and disharmony in life. Some principles are equality, balance, public interest, cooperation, and justice, by implementing those principles, it is expected that the living environment can sustain and transform into an ideal and expected objective.

Defilement and destruction of the environment cause loss comprising (1) economic and social injury, (2) sanitary hazard*,* (3) balance disorder in human life notably in dealing with ecology system. Damage and pollution on the environment can be categorized into some conditions, they are: (1) chronic, where the damage and pollution occur progressively within the slow movement, (2) shock or sudden, where the damage, destruction, and pollution on the environment occur suddenly and in heavy condition, (3) dangerous, at this condition, the biological destruction and loss fall to hopeless level and it causes genetic destruction due to radioactivity, (4) catastrophe, at this condition, majority of living creatures suffer organic death and it drives into extinct.

From the illustration above, it can be concluded that Islamic law is urgently needed to build a community who are aware of preventing and stopping destruction and disaster. Islamic law drives people to be responsible for protecting and conserving the nature and environment. If the acts and regulations have been well and properly applied, the nature and environment can grow in balance and harmony as expected. Due to active and positive development, particularly in nature and environment conservation, all Muslims are expected to actively participate by practicing the principles of Islamic law as mentioned in the previous discussion.

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