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Environmental Approach for Securing *Halalan Toyyiban* Concept in Food Safety - A Mini Review

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Abstract

The relationship between the *Halalan Toyyiban* concept and food safety has been well known and discussed among scholars since the early years. *Muslim*s are guided by the concept highlighted in the *Qur'an* to consume food. However, the widely occurring environmental pollution and contamination around the globe have threatened the status of natural food resources. One of the major threats to global food safety is the chemical contamination of the environment. Harnessing the ability of the microorganism in the environment to restore nature is one of the approaches used to ensure the concept of toyyiban is safely fulfilled. Using the Qur'an as a primary source and other published articles, this article connects the links between the wider *Halalan Toyyiban* concept and the environmental sciences related approaches and subsequently provides an alternative perspective to the *Halalan Toyyiban* concept, especially for the food safety issues.

1. Introduction

The word environment is first used in French as "Environ", which defines the surroundings and neighbourhood. Currently, the word environment is widely used globally which refer to the physical factors of the surroundings around human beings and also as the setting where humans, animals and plants stay and food and nutrition available to be consumed and to nourish the living things (Muhamad *et al.*, 2019). A good environment reassures the nourishment pathway will be attained and benefit the population. Many elements of an environment, including air, soil and water, are the basic elements. There are also referred to as interconnected systems comprised of the biosphere, atmosphere, hydrosphere and lithosphere (Haque & Talukder, 2021). Human activities and the other way around are always changing these four systems. The environment is the most crucial element for an organism to survive and function orderly and, most importantly, to perform its duty as a vicegerent of God on Earth.

2. Environmental pollution

In this modern era, continuous development has unintentionally caused environmental pollution and impacted the globe in many undesirable ways. Water, air and soil pollution are majorly contributed to the results of anthropogenic activities that cause changes in the environmental quality and destructively impact the environment, including its residents are human beings, animals, plants and microorganisms (Adam, 2018). It also included situations like unclean food sources, sudden climate changes and elevation of temperature.

These pollutants may consist of potentially toxic substances that can contaminate the foods consumed by other organisms, including humans. The pollutant can be organic and inorganic and may come from various sources of origin. Environmental clean-up strategies are usually implemented before the pollutants reach the environment (treatment) or after they are released to the environment (remediation) along the contamination pathways, as illustrated in Figure 1.

As the pollution continues, the natural nourishment and bounties provided earlier on the earth started to fade and consequently affected the human being. *Allah SWT* gave a reminder in *surah Ar-Rum*: verse 41 that a human being destroys this earth; therefore, He asked the doer to ponder upon the consequences of the actions and return to Him. He asked his servant to reflect upon their actions to improve the

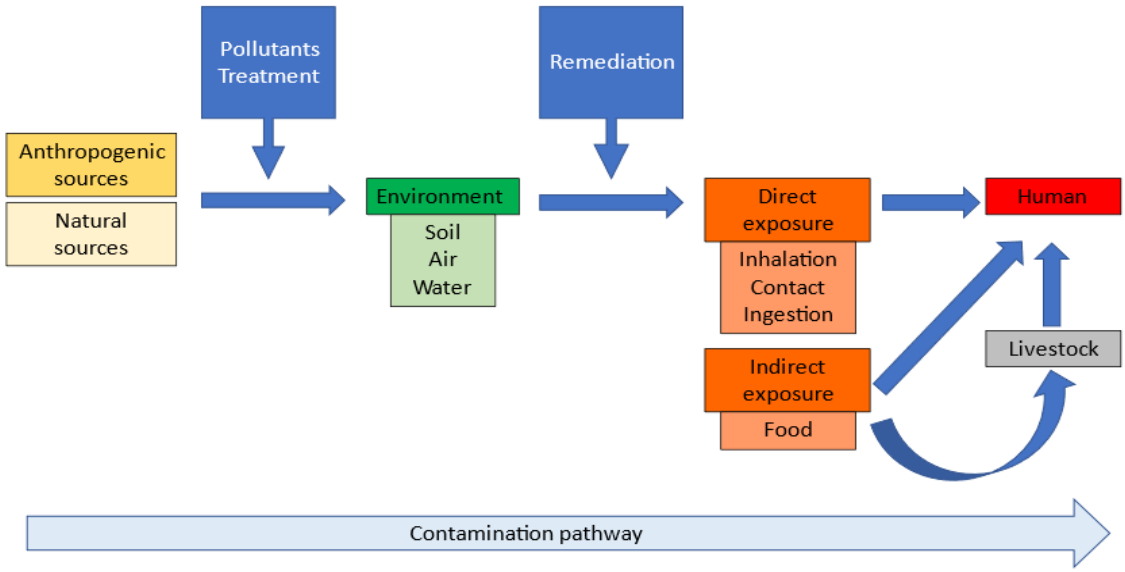

Figure 1: The fate of contaminants to human.

situation.

> *"Corruption has spread on land and sea as a result of what people's hands have done, so that Allah may cause them to taste 'the consequences of some of their deed and perhaps they might return to the Right Path'". (Qur'an ar-Rum 30:41)*

From the verse highlighted, it is certainly exposed that humans would cause corruption to the earth with their own dirty hands. However, humans can change the corruption to a better condition if they return to the right path.

Environmental preservation becomes the main agenda in protecting the natural environment from further destruction. At the same time, environmental restoration through remediation approaches was conducted everywhere to recover any damage caused by environmental pollutants. Today, it is become part of Fard al-Kifayah to treat the pollution so that all the Earth residents will have a better place to live and perform ibadah in a conducive sphere.

3. The clean-up of environmental contaminants

The environmental preservation concept is not only limited to avoiding the "corrupted" hands from destroying the atmosphere but also includes strategies to ensure the environment is free from harmful substances. A contaminated environment cannot supply good and pure raw materials. Many techniques are available to remediate the pollutants; however, cleaning up the environment using methods that will not harm the environment is crucial and could be very tricky at the same time.

Remediation is referred to as the process of eliminating pollutants from the sources. There are several types of remediation available such as chemical techniques, physical techniques and biological techniques. Each of the techniques is unique and available to be employed based on the condition of the polluted site and also the properties of contaminants. To successfully remove the contaminant, a comprehensive study of the contamination characteristics and properties is needed; hence an exact process could be chosen. Considerations must occur before employing the technique to ensure the benefits outweigh the harms. Remediation by traditional methods that employ physical and chemical methods is inefficient as it will always leave huge volumes of chemicals over (Tarekegn *et al.*, 2020).

Frequently, a combination of a few degradation strategies is being used to achieve fully degradation and remove toxic contaminants compounds. It is important to choose the right technique to clean up contaminants to ensure that the contaminants are fully removed and that no harm from the clean-up process is left in the environment.

One of the potential solutions for reducing and eliminating pollutants is by using bioremediation. According to Spellman (2021), bioremediation is any process that employs a living thing's potential to restore the polluted natural environment to its original state. Bioremediation is a technique that employs the special features of microorganisms to degrade pollutants to less toxic or even harmless substances for environmental clean-up. Studies on a microcosm of microorganisms and their ability have shown some hope for the bioremediation of toxic contaminants (Terzaghi *et al.*, 2020). These strategies were carried out by harnessing the ability of microorganisms, mainly bacteria. Those microorganisms will break down the organic pollutants into harmless metabolites or mineralise the pollutants into carbon dioxide and water (Zhao *et al.*, 2022). This technique is the most preferred to remediate the environment as it rarely leaves harmful traces after cleaning up.

4. Environmental preservation from a legal perspective

Environmental preservation from a legal mode took place in Malaysia when the Environmental Quality Act 1974 was introduced. It shows the effort of the country to conserve the environment. The objectives of the Environmental Quality Act are to promote self-regulatory on the part of the industrial sector and ensure direct participation in environmental protection (Environmental Quality Act, 1974). This act is an important action taken by the Malaysian government as part of the UN Conference on the Human Environment (Stockholm Conference) in 1972. Agenda 21 under the United Nations Environment Programme has outlined that integrated environment and development in decision making is needed by applying the economic instrument within the law.

Starting from that point, it can be seen that Malaysia has taken many actions from the perspective of law and economics in order to protect the environment. By virtue of section 34 Environmental Quality Act, Environment Impact Assessment is introduced. Regarding the section, Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 1987 has been enacted. Environmental Impact Assessment aimed to be implemented on a selected project to inspect and select the best form of project option offered, to recognise and incorporate mitigating measures, to predict the importance of residual environmental impact and to discover the cause and benefit of the project to the community. This can be seen in the Malaysian government's strategies to overcome the rapid development activities affecting the environment. Petroleum Development 1974 and Town and Country Planning Act 1976 are also among the acts that are being enacted in order to fight the effect of development on the environment. According to those acts, Malaysia still needs space to improve the environmental condition from the perspective of law.

From the economic perspective, Malaysia's Third Plan in 1976 introduced the concept of sustainable development. This concept is important to bring together economic and environmental strategies for Malaysia to be a developed country. It has been mentioned that environment-friendly business is more proficient since it can generate less pollution and benefit from the consumers' respect.

At present, Sustainable Development Goals (SDGs), introduced in 2016 by the United Nation (UN), has been referred to as the blueprint the ongoing development around the world so that development will align with the needs of people regardless of the economic status, race and religions (Bundschuh *et al*., 2022). The objectives included are eliminating poverty and preserving the earth, a home for all. Sustainable development can be defined as the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It aims to bring together the conservation and development objectives so thus our present and future generations will home a better place.

5. *Maqasid al-shari'ah* concept of environmental preservation

From the *Islam*ic perspective, the *Maqasid al-shari'ah* concept is defined as choosing a way of living perception in everyday life. According to (Auda, 2018), *Maqasid al-shari'ah* is a term that refers to order preservation, benefit achievement and harm prevention, equality among people formation, and law establishment. Allowing the clarification for decision making process to be easier will assist the *ummah* to become more powerful, respected, and confident among others.

There are three main objectives in *Maqasid al-shari'ah*, that is *Darrruriyyah* (Necessity), *Hajiyyat* (Requirement) and *Tahsiniyyat* (Embellishment). After protecting religion in the first group of *Daruriyyah*, the second point is protecting one's life. To protect life conveys many definitions that vary from one circumstance to another circumstance. One of the ways to protect one life is to be aware of nutrient intake in everyday life. Nutrient intake is commonly referred to as food intake and is the daily life activities of all living things to survive.

The environment needs to be well taken care of; thus, it will provide nutritious food. A previous study has proved that pollutants in the environment have altered the nutrients in foods that caused negative impacts on human beings as well as animals (Eskenazi *et al*., 2018; Pavuk *et al*., 2019; Tarekegn *et al*., 2020). Hence, to ensure the well-being of the *ummah*, it is needed for someone to take responsibility for clearing up the pollutants

6. *Halalan Toyyiban* concept in food safety

Allah SWT has made it obligatory for every *Muslim* to consume food that is *Halal* (lawful) and of good quality with sufficient minerals and vitamins as needed (Mokti *et al*., 2022). In *Islam*, daily food intake is guided to ensure the meals taken will help the *Muslim* to perform ibadah spiritually with a good state of physical and intellectual (Elgharbawy & Azmi, 2022). Not only to ensure physical health and alertness, but these two factors, *Halal* and of the best quality, will also be a factor that will help to increase the quality of one *Taqwa* (God-fearing) and *Syukur* (Gratefulness) towards *Allah SWT*.

This matter has been mentioned in *Qur'an*

> *"O ye who believe! Eat the good things that We have provided for you, and be grateful to God, if it is Him ye worship." (Qur'an al-Baqarah 2:172*)

In verse, the presence of the word *Toyyib* which means good and pure has made the *Halalan Toyyiban* concept a complete guideline. *Toyyib* is one exhibition of Ihsan and Itqan concepts (competent and orderly manner). Due to this reason, the quality or estimated value of the lawfulness or the unlawfulness (*Halal* or *Haram*) of a matter cannot be judged separately without taking into consideration the process of production, manners, and ways of consumption and also its effect (Mokti *et al*., 2022).

This concept is a complete guideline for preparing wholesome food from the farm to the table. Food prepared must be from the permissible ingredients that are clean and hygienic. If the ingredients are already contaminated with pollutants, they will not be safe for human consumption and have bad effects on humans. These conditions somehow contradict the concept of *Halalan Toyyiban* that has been mentioned in the *Qur'an*. The *Halalan Toyyiban* concept is aligned with the food safety requirements that bring all people, not only those limited to *Muslim*s, to attract the application of this concept in their food preparation process.

6. Conclusion

To tackle the food safety issues, the preservation of the environment as the largest part covering the food chain needs to be considered. The environment needs to be clean to supply nutritious and free pollutant food to humans and animals. To ensure the nourishing food is of the best quality, pay attention to the food preparation process and from the initial stage at the source of origins of the raw materials. This is where environmental preservation takes place, contributing to and ensuring *Halalan Toyyiban* and food safety issues meet the necessity, thus guaranteeing the food arrives on the plates is only from the good and pure sources of the raw materials. The current best strategy to avoid further damage to the environment is by implementing sustainable development goals, both potential for environmental protection and economic sustainability. Apart from that, the environment must be well taken care of to achieve sustainable development by fulfilling all of its requirements, including a proper strategy to balance the ecological system by ensuring the endangered species are not threatened and urbanisation with forest destruction are well planned. Pollution and contamination of the environment should be avoided at all costs, as all the elements play a role in providing a well-balanced network (Fahad *et al.*, 2020). Furthermore, these contribute to the well-balanced biogeochemical cycle of an ecological system that provides the earth's residents with good sources of nutrients.

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