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Role of Environmental Fiqh: Exploitation of Mangrove Forests on the South Bone coast, South Sulawesi

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This article aims to explain and explore the important role of environmental fiqh in the exploitation of mangrove forests on the South Bone coast . This study exams the context of the exploitation of mangrove forests at an in-depth level using a qualitative-descriptive approach. The findings reveal that people must protect and maintain mangrove forests, as they are a source of people's livelihood which can accommodate and support varieties of marine food. People must preserve the sustainability of the mangrove forest ecosystem which has a numerous benefits for marine animals. Environmental fiqh is a rule of life for people who are forcing, controlling, binding and preventing the sustainability of the mangrove forest ecosystem. The Islamic law in environmental fiqh preserves mangrove forests as habitats can increase the resilience of fish, shrimp, crab and biota seeds. The development of environmental fiqh controls and overcomes species extinction after being cleared of mangrove trees in the coastal area.

Key words: *Environmental fiqh, exploitation, mangrove forest, sustainability.*

Introduction

Indonesia is an emerging country which where destruction of mangrove forests is prevalent . It is important to respond, because the mangrove forest ecosystem has been threatened with sustainability of flora and fauna on the South Bone Coast.

The cutting down of mangrove forests to become deserts on coasts and rivers can destroy millions of species of fish, shrimp, and crabs which may become extinct. People who live around mangrove forests can lose their sources of livelihood such as food and medicine (Duke, N.C., Maynecke 2007), (Mckee, Cahoon, and Feller 2007).

Mangrove forests have special characteristics to protect and sustain life from a variety of animals and plants. Mangrove forest ecosystems are rich in natural resources for people in coastal areas (Kusmana and Sukristijiono 2016). People who live in coastal areas are greatly dependent on mangrove forests. However, mangrove forest ecosystem functions are degraded due to free exploitation. Mangrove forests have been converted into ponds in all areas of the South Bone Coast.

Damage to mangrove forests makes rivers shallow, populations of fish species, shrimp and crabs are reduced. Fish, shrimp, crabs grow faster, they can all survive longer in rivers and ponds that have mangrove forests (Zhong 2019), (E Prihartanto 2019). Fish, shrimp, crabs that live on the coast without mangrove forests become small and thin. However, fish, shrimp, and crabs will get more nutrients from food juices in areas which have mangrove forest density. Mangrove forests can affect growth, survival and production of fish, shrimp, crabs and better water quality (Venkatachalam et al. 2018).

Mangrove forests contain a tremendous amount of oxygen, it is easy to adapt to the coastal environment, the roots support the soil on the banks of the river and the leaves release salt. Mangrove trees produce abundant lateral roots to supply coastal aquatic animals with food. Mangrove roots are very functional in regulating gas exchange.

The benefits of mangrove forests can overcome the threat of erosion (Carter, Schmidt, and Hirons 2015), (Shi Qian, Cai Aizhi 2019), big waves, storms, tsunamis and the flow of river water (Zhang et al. 2012). Mangrove forests play an active role in protecting the coast and rivers, having a mangrove tree root system can reduce water flow and wave power. Mangrove forests can normalise water quality and fertilise marine animals and biota on the coast and rivers (Vazquez et al. 2000), (Sagala 2019). Various types of fish, shrimp and crabs that live without being given food can be found in tight and fertile mangrove forests that grow in ponds. v.

. Environmental Science is a moral measure in right or wrong. If human actions are beneficial to other humans or other living things, then they have true morality. If these actions are dangerous, then that is morally wrong (Lahafi et al. 2018). Therefore, the destruction of the mangrove forest environment is an immoral act, which does not prioritise the benefits contained in the mangrove forest environment.

Farmers find it very difficult to overcome the diseases and viruses of fish, shrimp, and crabs in deforested mangrove forests in ponds (Nagelkerken et al. 2002). Farms become unproductive by often failing to get harvests. In addition, deforested mangrove forests are very influential in the economic welfare of fishermen and pond farmers.

Results and Discussion

A. Exploitation of Mangrove Forests on the South Bone coast

Mangrove forests are very tight and fertile with various types of mangrove trees on the South Bone coast. Mangrove forests are very broad and tight along the beach. Between 1970 and 1998, t mangrove forests were still dense, before becoming ponds. Fish, shrimp, crabs, and sea animals are still very easy to find and catch in this mangrove forest area. Fish, shrimp, crabs abound in the mangrove areas. However, when farmers cut down and burn mangrove forests, no mangrove trees can grow in the pond area.

Tight mangrove forests can maintain and protect the habitat of various species of fish, crabs and shrimp and other biota. Fish, crabs, shrimp and breeding biota are highly dependent on mangrove forest ecosystems on the South Bone coast, where mangrove forests are a habitat for fish, shrimp, crabs and other biota. People who catch fish, shrimp, crabs and other biota only use traditional tools or manually . The existence of mangrove forests can increase daily needs.

Previously there were many types of mangrove trees that grew large, tight, fertile and tall trees such as the *cokke-cokke*, *bakko* tree, *fire*-tree, *palm* tree, and *kalling-kalling* trees in mangrove forests on the South Bone coast. However, all mangrove areas have been damaged and deserted. Illegal logging in rivers and coastal areas kill large mangrove trees within a very large area. Mangrove forest ecosystems that have been destroyed in the rivers and coastal areas cause the disappearance of ecological balance in the environment .

According to pond farmers, since mangrove forest is barren, each year they suffer financial losses. The embankment from the pond cannot hold the strong current of water flowing. Losses are experienced by farmers as a result of collapsed embankments, shrimp and fish which can escape the pond. Various disasters occurring in pond embankments are not

separated from the role of mangrove forests. There is a strong likelihood that due to the collapse of the embankment e no mangrove trees can grow in the pond area .

People's overcome damage to ponds and marine animal habitats by intensive planting of mangrove treesy on the riverside. Mangrove trees are very useful to strengthen pond embankments to prevent erosion and silting. They play y a role in resisting large waves from ships passing the river not far from the embankment ponds. Therefore, the condition and function of mangrove forest ecosystems is restored except planting trees in already deforested areas.

Consequences of deforested mangrove forests include reducing the quality of the ecosystem , the supply of nutritional foods becomes scarce as support for the breeding of various species of fish, shrimp, crabs and other biota. Deforested mangrove forests affect the growth of all marine animals that are small and tasteless when consumed.

While beaches and rivers can improve the welfare and prosperity of people living on the South Bone coast, beaches and rivers provide access to trade routes with other islands in Indonesia. Some natural resources are traded such as rice, onions and pepper, while eggs from egg farms can be sold on the island of Flores are Ende, Labuang Bajo, Maumere, Larantuka, Bima. Therefore, there is no reason to exploit the mangrove forest ecosystem to support improving the community's economy.

Beaches and rivers are a natural wealth that must be preserved. Mangrove forest ecosystems contain marine food nutrition. Mangrove forests support a healthy ecosystem. After the mangrove forest was cut down and damaged, many people complain about reduced numbers of shrimp, crabs and fish .

People must be pro-active in protecting and maintaining the mangrove forest, because it can be a source of people’s livelihood on the South Bone coast . Mangrove forests have the function of accommodating a variety of marine food. They can neutralise and regulate water quality from various shipping pollution e. Therefore, people must preserve the sustainability of the mangrove forest ecosystem a range of benefits for marine animals.
Beaches and rivers along ship routes can pollute the mangrove forest ecosystem as a habitat for flora and fauna . Mangrove forests have the ability to maintain and neutralise water quality so all species of marine animals can survive . Environmentally damaging practise such as unknowingly dropping oil in rivers can disrupt the activities of fish, shrimp, crabs and the biota.

Deforested mangrove forests must be stopped in an effort to revitalise thin and dry areas. Revitalising mangrove forests is the main reason, because mangrove forests on the South

Bone coast are very rich in nutrients including all species of fish, shrimp, crabs and the biota. People really enjoy the rich natural resources of mangrove forests in this area.

B. The Role Fiqh Environmental Towards Exploitation of Mangrove Forests

God created the universe as an environment to care for and protect the mangrove forest ecosystem. The universe is a place for the environment of all living things. Therefore, preserving world means applying Allah's law through the thoughts of Islamic jurists called fiqh. In Fiqh indeed there is little study specifically about the environment. But the discussion of fiqh covers all environments including mangrove forests.

As a construction in environmental fiqh, it is important to formulate mangrove fiqh in Islam. The presence of the term environmental fiqh is applied in Islamic law by regulating the sustainability of the mangrove forest ecosystem. In addition, the implementation of mangrove fiqh translates to human obedience to God.

Degradation of mangrove forests can affect all marine animals and biota. Damage can result in reduced catches of fish, shrimp and crab, so mangrove forests become thin and dry, while fish, shrimp and crab species find it difficult to maintain life. They try to find new habitats that enable feeding and breeding . . Mangrove fiqh can be applied so that the adaptation patterns of marine animals become easier in the mangrove forest environment. People do not disturb the habitat of marine animals as they are a suitable place to survive.

Therefore, reference to mangrove fiqh is constructed through the main sources of the Qur'an and Hadith. In the Qur'an, in Surah Al-A'raf 56, Allah says ; "And do not do mischief on earth after it has been properly created, pray to Him with fear and hope. Indeed, God's love is very close to those who do good. " Thus, departing from the word of God, the environmental fiqh has a role to protect and preserve in order to avoid degradation and damage the stability of the environment of the mangrove forest ecosystem.

Furthermore, by transforming Islamic law mangrove fiqh aims to protect habitats from the destruction of all species of fish, shrimp, crabs. The involvement of the environmental fiqh as a form of Islamic law is very supportive of mangrove forests from the erosion and silting of rivers. It is important to place the environmental fiqh in fortifying the ecological, physical and economic decline of mangrove forests regarding the degradation of the mangrove forest environment. The environmental fiqh also has a legal role ensuring sustainability of marine animals including various species of fish, shrimp and crabs.

Environmental fiqh is a rule of life for people who are preventing the sustainability of mangrove forest ecosystem. Islamic law contained in environmental fiqh preserves mangrove

forests as habitats that are able to increase the resilience of fish, shrimp, crab and biota seeds. In line with the construction of environmental fiqh, it guarantees that mangrove forests are also very influential in the structure of fish communities on coral reefs. The development of environmental fiqh controls and overcomes species extinctions after being cleared of mangrove trees in the coastal area.

After deforestation of mangroves , fish, shrimp and crabs may become extinct. Consistency in applying environmental fiqh can control farmers who cause environmental damage to ponds by spreading poison until all fish, shrimp, crab and biota species die. In addition, various species of fish, shrimp, crabs not only die in ponds, but pond waste is also dumped into rivers. Only *bandeng* fish and sitto shrimp are allowed to live develop in ponds . Rules have violated the environmental fiqh to limit species of fish, shrimp and crabs and other biota .

Productivity and quality decrease when the mangrove forest ecosystem is reduced by various species of fish, shrimp, crabs and biota . In addition, not only does it affect the growth and development of fish, shrimp, crabs, but also causes climate change and a decrease in water quality. Therefore, it is evident that mangrove forests cannot be separated from environmental fiqh.

One of the most important laws in the fiqh of mangroves originating in the hadith is *"la dharara wala dhirara,"* Which means "do not corrupt and do not be corrupted." Islamic law in the environmental fiqh is transformed into the wrong system of managing mangrove forests by people on the South Bone coast . The wrong technique of managing ponds is the opposite of environmental fiqh which eliminates mangrove forests, so that no trees can grows. Islamic law in the environmental fiqh teaches not to damage the mangrove forest which is are rich in nutrients, Ponds cannot be a habitat for *bandeng* fish, if they are not supported by rich nutrition from mangrove forests. *Bandeng* fish only depend on food from feeding without additional food from the mangrove trees, so growth and development are slower.

The role of Islamic law regarding environmental fiqh can be harmonised by a system or technique of converting ponds to mangrove forests, so that fish, shrimp and crabs are free to obtain food even without fertilisers and food. The growth and development of fish, shrimp and crabs is very fast when food is available in ponds. Farmers can get more catch from a variety of fish, shrimp and crabs. The current pond system developed by farmers only rely on *bandeng* fish or sitto shrimp, but sometimes it fails to harvest.

Therefore, efforts to restore the condition of mangrove forests, need the help of f environmental fiqh to make ponds productive by prioritising the reforestation or replanting of mangrove trees. Environmental fiqh is a product of Islamic law which can be implemented in ponds that are converted by planting mangrove trees. The provisions in environmental fiqh aim to restore the mangrove forest ecosystem to be more productive, supply abundant food for marine animals, resist erosion, and transform fertile and rich ponds from various species of marine animals that live in ponds. Planting mangrove trees in ponds means that they are no longer restricted to banks of rivers, but can also be found in ponds that are transformed by their presence . The role of environmental fiqh is very important in responding to the existence of ponds so that they are no longer living in thin and dry land lacking rich nutrients . On the contrary, the goal of Islamic law in the form of environmental fiqh is to create a fertile and productive pond in the South Bone area.

Conclusion

Mangrove forests must be protected and maintained . They are menjadi source of people life on the South Bone coast . Mangrove forests can accommodate and support a variety of marine food. They can neutralise and regulate water quality from various sources of pollution . The sustainability of the mangrove forest ecosystem must be preserved as it numerous million benefits for marine animals.

Environmental fiqh is a rule of life for people who are preventing the sustainability of the mangrove forest ecosystem. Islamic law contained in environmental fiqh aims to preserve mangrove forests as habitats which can increase the resilience of fish, shrimp, crab and biota seeds. The construction of environmental fiqh guarantees that mangrove forests remain important in the structure of fish communities in coral reefs. The development of environmental fiqh controls and overcomes species extinctions after being cleared of mangrove trees in the coastal area.

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