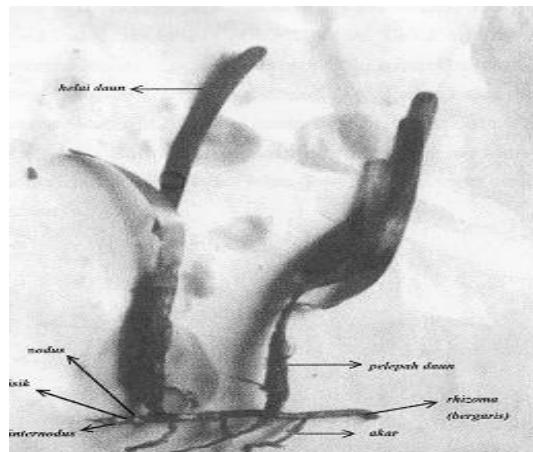
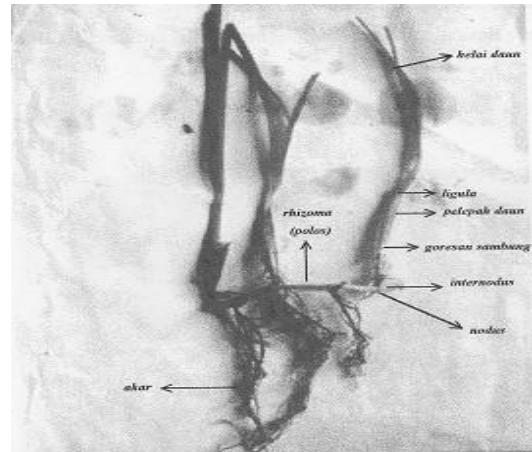


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Thalassia hemprichii (kiri)



Cymodocea rotundata (kanan)

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TELAAHAN

BIODIVERSITY CONSERVATION IN INDONESIA REQUIRES RELIGIOUS FOUNDATION

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ABSTRACT

Indonesia is a megabiodiversity country. But the loss of habitat and exploitation have threatened our biodiversity. So far many projects have failed to protect the biodiversity in Indonesia. To be successful, conservation works in Indonesia must deal with the environmental ethic. Religion is one source of ethic. Since most Indonesians are Moslems it is imperative that Islamic scholars and preachers include environmental ethic in their speech. It is encouraging to find out that Islam does support conservation of nature, including biodiversity. If conservation of biological diversity has been understood by the general public as a religious duty, it will be much easier for conservation workers to do their jobs.

Keywords: *Islamic environmental ethic, biodiversity conservation*

INTRODUCTION

Having wet tropical climate and consisting of thousands islands, Indonesian archipelago is rich in Biodiversity. Although Indonesia's land area is only 1.3% of the world's, Indonesia has 10% the world's flowering plants, 12% of its mammals, 16% of its amphibians, 17% of its birds and 12% of its fish (Ministry of National Planning Agency, 1993). However, this high biodiversity has been under serious threat. Most Indonesian coral reefs, one of the most productive aquatic ecosystems, have been damaged. The most productive and diverse terrestrial ecosystem, the tropical rain forests have been deforested extensively. The rate of deforestation in Indonesia was 1.8 million hectares in 1990-1997 and increased to 2.8 million hectares after the collapse of the New Order regime in 1998, than lowered again in 2000 (Ministry of Forestry, 2007).

Indonesia actually has very extensive conservation areas, but conservation of biodiversity in Indonesia has failed (Jepson and Whittaker, 2002). Even the mega project, the Integrated Conservation and Development Project (ICDP) funded by the World Bank was not successful (Well *et al.*, 1999). It was assumed that poverty in rural areas poses the biggest threats to conser-

vation areas. So, improving their prosperity would be the best solution. But apparently the bigger threats come from large private and public investments (mining, logging, plantation, road construction, *etc*).

If the current threats continue unchecked, Indonesia will lose its rich biodiversity. Many projects have failed to protect conservation areas because it did not address the crux of the problem, namely human misconduct. A World's Bank study revealed that managing conservation areas in developing countries is essentially managing people. To be successful, conservation of biodiversity in Indonesia should deal with the most fundamental aspect of life, the human's ethic. An ethic serves as a standard in reference to which a government policy or people's behavior be judged Callicott (1994). One source of ethic is religious teaching. Religious teaching can become a strong driving force to motivate people. Even if people have not practiced the religious teaching, at least they know what they should have done and they feel guilty for not having done so. Conservation of biodiversity in Indonesia requires religious foundation (Wiryono, 2008).

THE NEED FOR ENVIRONMENTAL ETHICS

In the last 100 years human has inflicted tremendous impacts on earth. Some conservationists have blamed the western view on the relation between man and nature as the root of environmental problems. Solving the environmental problem, therefore, requires a radical change on the human's view of nature. Western traditional Judeo-Christian view of nature is based on biblical text. Callicott (1994) classified three types of interpretation of Judeo-Christian worldview on the relationship between human and earth. First is the mastery or despotic interpretation of Genesis. According to this interpretation man is created in the image of God and given dominion over and commanded to subdue the earth and all its creatures. This interpretation gave birth to anthropocentric view of nature. Every thing in nature is valued on the basis of its benefit to man. A species of plant or animal has value only if it has benefit to man. Rare species which has no direct benefit to man will not survive under such moral regime. A more moderate interpretation of Genesis, stewardship interpretation, argued that being an image of God man has been given not only special right and privilege but also duty and responsibility. Man must exert his power wisely. An abuse of his power to degrade the earth means violation of the trust that God has given him. The third radical interpretation of old biblical creation myth, presumed that God cared for the whole creation and for each of its parts equally. As man acquired divine knowledge by eating the fruit of knowledge, he began classifying other creatures as good and bad according to his interest. Any thing useful to him was classified as good, and anything that made his life difficult was classified as evil. Man nurtured and cultivated the anthropocentrically good parts of nature and tried to eliminate the evil parts. This anthropocentric action upset the balance and order of nature. Then man, who illegitimately judged good and evil, was cursed by God and expelled from the Garden of Eden. Based on this third interpretation, man is just a member of the nature. He is not superior to other creatures.

Meffe and Carroll (1994) classified Western environmental ethics into four: anthropocentrism, Judeo-Christian Stewardship, biocentrism and ecocentrism. In anthropocentrism, man is the lord and master of nature. But even anthropocentrism can be effectively used for conservation. For example, excessive logging is considered unethical because we deprive future generation of the valuable forest resource. In Judeo-Christian stewardship man is the caretaker of nature. In biocentrism every living thing is considered equal. All living things have intrinsic value and should enjoy moral standing. In ecocentrism, man is just a plain member and a citizen of the biotic community. The golden rule of ecocentrism: A thing is right when it tends to protect the health and integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise. Ecocentrism gave birth to a radical environmental philosophy deep ecology. Callicott (1994) believed that the Judeo-Christian Stewardship environmental ethic is commendable. This ethic is much easier to promote than deep ecology or Native American shamanism.

Conservationists and environmental philosophers have searched for environmental ethics from other religions and traditions Islam, Hinduism, Jainism, Buddhism, Taoism, Confucianism, Zen, etc. (Callicott, 1994; Meffe and Carroll, 1994). Basic principles of Islamic teaching regarding conservation of nature was given among other in Bagader *et al* (1994) and Izzi-Dien (2000). Since Indonesia is the largest Moslem country in the world, it is important to develop environmental ethic based on Islamic teaching.

ISLAMIC VIEW ON CONSERVATION OF BIODIVERSITY

Conservation of biodiversity is part of conservation of nature. The basis of Islamic environmental ethic is the dual position of man on earth. Man is vicegerent of God on earth, meaning that he has the authority to manage other creatures and non living things. But man is also the slave of God, meaning he must obey his master's rule. Although God says that everything on earth has been subjected to man, it doesn't mean that man can do whatever he wants with the

earth. As a vicegerent, man is given a trust to manage the earth according to God's rule, or natural laws and he must not betray that trust. Man is granted stewardship of the earth because he is the only creature having the capacity to do it. The Quran mentions in many places that Moslems must contemplate on nature because natural phenomena are signs of God. For example one verse reads: *Verily in the creation of heavens and earth and the alternation of night and day, there are many signs for the people of good sense* (Quran 2:190). In Arabic the word for sign is *ayat*, which is also used for verse of the Quran. So, Islamic scholars have considered nature as cosmic or ontological Quran which is distinct from and complementing the written Quran (Nasr, 1993). Studying nature is therefore a religious duty just like studying the written Quran. The cosmic signs, which are revealed by natural sciences, as well as the written verses, should become our guidance in managing the earth.

It is interesting to find out that Islamic teaching highly appreciates biodiversity despite the fact that Islam originated in the desert region where biodiversity is low. The Quran orders the Moslems to think about the diversity of plants and animals. Here are some examples. *He it is Who sent down rain-water from sky and thereby caused very kind of fruit to grow and then with it produced green fields and trees and from them brought forth close growing grain and from the blossom of palm trees brought forth laden sheaths of clustering dates and vineyards and olive groves and gardens of pomegranates, though their fruit resembles each other, yet each has its distinctive quality. Behold, how they bring forth fruit and how their fruit ripen, for there are signs in these things for those who believe* (6:99). *And likewise, men, beast and cattle also have different colors* (35:28). *There is not a living creatures on earth nor a bird that flies with its two wings, but are communities like you* (6:38)

The Prophet Muhammad, peace be upon him, had a great concern for plants. He said: *If any Moslem plants a tree or sows a field from which a human, bird or animal eats, it shall be reckoned as charity from him* (Hadith of sound authority narrated by

Bukhari and Muslim). He also said: *If the day of resurrection comes upon anyone of you while he has a seedling in hand, let him plant it.* (Hadith of sound authority narrated by Bukhari and Muslim). He forbade that man needlessly and wrongfully cut down any tree which provides valuable shelter to humans or animals in the desert.

Based on several hadiths, Bagader *et al* (1994) mentioned that Prophet also commanded his followers to show mercy on animals. On an occasion he ordered a man who had taken the nestlings of a bird from their nest to return them whence he got them. He mentioned about a woman who would go to hell because she kept a cat without giving food. On the other hand, he mentioned about a person whose sins would be forgiven because she provided water to a thirsty dog. He forbade that a fire be lit upon an anthill. Even during a war, the Prophet forbade the killing of bees or captured livestock. Based on the Pro-phe-t attitude toward animals, an Islamic Scholar wrote about animal right seven centuries ago.

Conservation of nature based on Islamic teaching has been written in a book by Mangun-jaya (2005), and several books containing the Quran's verses regarding natural sciences have also been written. However, environmental issues, especially the conservation of biodiversity have not been included in regular preaches, such as the Friday sermons or religious program on TVs. Because many Indonesians still respect religious scholars and preachers, teaching biodiversity through religious speech will be effective. Even if many people will not automatically do what their preachers advise them to do, at least they know that conserving biodiversity is a religious duty. If conservation of biological diversity has been understood by the general public as a religious duty, it will be much easier for conservation workers to do their jobs. They have not only legal foundation, but also religious foundation. Local people and government official will no longer perceive conservation movement as western values to be imposed upon them.

CONCLUSION

Conservation works in Indonesia have not been successful so far because we have not

dealt with the most fundamental aspect of life: an ethic. Islam, the religion adhered to by most Indonesians does support conservation of nature, including biodiversity. Moslem scholars and preachers must include the biodiversity conservation in their speeches. Considering conservation of biodiversity as a religious task, Indonesians would be more willing to conserve biodiversity.

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