

The Management Of Mangrove Forestry Based On Local Wisdom In Coastal Community At Deli Serdang Regency And Serdang Bedagai Regency

Farid Aulia

Faculty of Law, University Al-Azhar Medan, Sumatera Utara

e-mail : faridaulia79@gmail.com

Abstract-The existing of local community in the exchange of environment of growing local wisdom on mangrove forestry management has become a very important study. There is very closed interaction between the local community and the mangrove forest. The aim of this research is to analyze the existing of mangrove forest in coastal area of Deli Serdang Regency and Serdang Bedagai Regency as a part of local wisdom that has been used by the coastal community in mangrove forest management. This study uses Cultural Ecology Theory by Steward (1995) in case of analyze the adaptation process of community. The growth of local wisdom of mangrove forest management at coastal area of Deli Serdang Regency and Serdang Bedagai Regency was through learning process that was introduced by some institutions. The management of mangrove forest was done by growing social awareness of managing mangrove forest based on social capital of group community. To reach this aim, the method of this study is qualitative approach with depth interview, observation participation and focus group discussion.

Keywords: *Social Capital, Mangrove Forest, The Management of Mangrove Forest Based on Local Wisdom*

INTRODUCTION

The existing of mangrove forest has its unique and durable. Its unique was caused of its position as the forest transition between land forest and sea forest. This condition caused mangrove forest was very durable of external effect, especially because of the species of mangrove biota has small tolerance of external exchange (Alikodra,1995). This condition cause the mangrove forest was very durable and easily broken. The damage of mangrove forest was happened by mechanical works as cutting and deconstruction works. So the indirect effects as the exchange of water salinity, water pollution caused of erosion, oil pollution and the substitution function of coastal area on development.

The mangrove forest in Sumatera was focused at East Coast. Its caused of: 1) East Coast has the lower land than the West Coast of Sumatera. 2) There are many big rivers in Sumatera are flowing to East Coast. These conditions push the growth of mangrove forest on the end of the river. Its become more fertile and width because so many sediments in the flows of the river (Dahuri,1997). According to Dahuri (1997) since 1993, the degradation

of sea land and mangrove forest amount 52% from 5,2 million hectares in 1982 becomes 2,5 million hectares. It means in 11 years, a half of its has been broken. From the data, 40% of broken land is in Irian Jaya and the rest was in the others island.

The use of land and exploitation works on decade 1990-2003 were happened frequently. It may causes the change of mangrove area. The change of land use is caused by addition of population, economic activity and the illegal action as illegal logging to make coal and in use of making building, mangrove exploitation, fishery and plantations. According to the information, the rise of community awareness in both regencies to do the action of conservation comes from the actions of government and non-government organization to do the conservation programs that frequently campaign mangrove conservation.

The appear of mangrove conservation awareness slowly grows the values of local wisdom in mangrove forest management. As happened on Bajo's community that has its local wisdom. It can ecologically balanced between the economic value of the sea and the conservation concept of coastal, mangrove and sea rock. Using the simply equipment on catch fishes will give the positive ecology consequence to the conservation of ecology and natural resources (Utina, 2012).

Some findings of the researches shows that the local community was the great wall to restrict negative effects from the damage of resources (Mackinnon,1993;Edmunds and Wollenberg,2003;Claridge and O'Callaghan,1995). Local community has accountability and commitment in resources management with adaptive benefit through local wisdom (Korten,1986). The local wisdom of Dayak Community in Anak Benuak Village can conserve forest resources for 300 years without permanent logging and no varieties are disappeared (Gonner, 2001). The Baduy Family has its local wisdom of using and taking care of the forest as the sustainable live needs (Handoyo,2003). The management of local forest can make the social balanced, the economic security and the sustainability of the function of resources and environment and forest conservation (Darusman,2001).

So that, it needs to do the study of local wisdom that has relationship with the conservation of mangrove on east coastal area of North Sumatera, in case of Percut

Village on Percut Sei Tuan District at Deli Serdang Regency and Nagalawan Village on Perbaungan District at Serdang Bedagai Regency. This research is to explore the forms of local wisdom on coastal community, holistically and comprehensively as a part of community learning process through the community empowerment process that was given by non-government organization.

MATERIALS AND METHODS

The Kind of Study

The kind of study that is used on this research is qualitative. Collecting data and taking information diachronically will be done to know and to understand completely and systematically about the mangrove forest through mangrove forest management based on local wisdom for first step and so become the real empowering community and sustainable (Moleong, 2000).

The data will be collected in two sources, its called primary data and secondary data. The primary data get from depth interview and participant observation that aim to catch the information about mangrove forest management, and its sharpened by focus group discussion.

The other guiding instruments are the camera and tape recorder. They are very useful to avoid missing data and they can record the implementation of mangrove forest management and conservation on coastal community. Beside of that, researcher try to develop rapport (make a good relationship with the informan). The rapport aims to make smaller distance, decreasing suspicious or the other things that can be disturbance terms for the interview.

Research Location and Data Analyze

The Percut Village on Percut Sei Tuan District at Deli Serdang Regency and Nagalawan Village on Perbaungan District at Serdang Bedagai Regency were selected purposively as the coastal community that have most local wisdom potential. The analyze simultaneously used on going analysis mixed with culture ecology analysis where the concepts or theories can be different with the reality in field. Every new informations will be got the inferences, so can be used for build and sharper the questions for next days. This analyze is doing by follow some process, consist of: the serve of the data and to take the conclusion based on served data.

RESULT AND DISCUSSION

Learning Through Grouping

Percut Village on Percut Sei Tuan District at Deli Serdang Regency

Some institutions gave their participations on educating local community about knowledge of the importance on taking care of mangrove forest. In one year, more than 5 institutions that frequently doing socialize, education, advocation, rehabilitation, restoration and mangrove conservation on Percut Village. There start from the government, the private through CSR Programme, NGO (Non Government Organization) and University that doing social devotion. One of institution that still intense in doing rehabilitation, restoration and education about mangrove is Pilar Indonesia.

Pilar Indonesia and the local community on coastal Percut was doing mangrove reforestation by planting about 20.000 mangrove trees contains of *Rhizophora* Sp (mangrove tree), *Avicennia* Sp (api-api) dan *Bruguiera* Sp (mata buaya trees). The reforestation was done participatively by local community starts from build mangrove fertile center, choosing high quality seeds, seeds plantation and seeds cultivation. The mangrove restoration is done at the beach line and make it as pilot project and education forestry.

The action of growing up the community conservative behaviour: for years not aware about the fishes that they caught and the tourism was very depended on the mangrove forest conservation. The facts that its must to do mangrove conservation through mangrove ecosystem restoration that was integrated with diversity livelihood and supported ecotourism potential development that very important for Percut Coastal and around.

Nagalawan Village on Perbaungan District at Serdang Bedagai Regency

Kayu Baimabai, is the name of the Sei Nagalawan Village group. This group first is formed cause of the will to release the dependency of economic between traditional fisherman and "toke". "Toke" is the man who buy the fishes from the fisherman.

The dependency was happened because there are many fisherman has not own his fishery equipment and his own ship. "Toke" gave facility or helped the fishermen by gived fishery equipment and ship. But the fishes must be sold to him with the toke's price.

On early 2010, the fisherman group "Kayu Baimbai" has been successfully independent from the toke. They successfully optimize the government charity through PNPM Mandiri Programme. This programme is used to set the fishermen free from toke. The Kayu Bimbai Group success to sell the fish directly to the bigger toke. The optimize of the fishes that they catch was supported by organization works such as "infaq sotong", how to manage the benefit of the group, the saving of the benefit (SHU) and mangrove conservation. These works was doing in order to make

the fisherman easier to sell their fishes, the fishermen savings, and to make cash money for the group in order to promote the wealth of the fishermen that joined on the group.

There is a group consist of the wife of fishermen group in Nagalawan Village. When the fishermen oriented on fishes, the women group was oriented on primary needs food. The women group was called Muara Tanjung. This group was established on October 1, 2005. As time goes by, this group have the others works under Non Government Organization and Government that gived workshop for women in Muara Tanjung Group. The workshops consists of making purun mat, hat and the other craft.

The Muara Tanjung Group was take the workshop about how to make syrup and chips from mangrove as the main ingredient. As time goes by, the technique of making syrup and chips has some improvement and modification until now. The other activity of Muara Tanjung Group is called Credit Union (CU). CU is the saving and credit activity that can be used by community Muara Tanjung Group.

On 2012, the groups is recommended to the government to become “Koperasi”. So that the institution has its own law firm. The group of men and women that has been joined became one, formed as a “Koperasi” was named Muara Baimbai (the join between Kayu Baimbai and Muara Tanjung). This “Koperasi” on doing its function own 4 business:

1. Product of fishing
2. The household wife’s craft with mangrove as a main component
3. Savings and credit
4. Mangrove tour

Formed Local Wisdom

The exist of economic activity with use mangrove as coal-making component, taking mangrove wood for the foundation of building and land clearing for palm plantation gave the great effect to the mangrove forestry damage on the coastal of Deli Serdang Regency and Serdang Bedagai Regency. On last ten years, the mangrove forest was all logged by illegal logger. The economic reason was became the reason why they depend their job as illegal logger. The logger was also logging the mangrove roots that can be processed as coal. The species of bakau and api-api was the main choice to log.

Putra (2008) said that the local wisdom can be defined as a package of knowledge and practices from past time or past generation and from the experience that belongs to a community on a region. It can be used to solved many problems or difficulties. The local wisdom

can be transmitted through learning process that was done by one generation to the next generation.

The mangrove forest in community perspective not only the groups of trees, animals that have its ecologies function, but also has its economic function and socio-culture, so that gave effect to community life in mangrove forest management. The community will give respond to the change of environment with the substitute of the part of the culture that brought by the other people that have any interest (Ortner, 1994).

The research of Sudarmin, et al (2013) findings: the applied of local wisdom that was formed based on learning of “soft skills” from the Karimunjawa Community: work hard, mutual cooperation, religius, friendly, care and like to take care of the resources. The values of local wisdom consist of the moral message through the board that was established on “National Park Karimunjawa”: save the sea turtles, seafish, sealife and sea rock variety in Karimunjawa. The efforts was also done to the rare plantation or protected plantation as Dewandaru Flower, Setigi and Kalimosodo in Karimunjawa.

Research that doing by Nanlohy, et.al (2015) about tradion of SASI at Maluku, findings that the conservation of mangrove population can still exist if there is an agreement of entering border, taking or doing something to population or ecosystem for the current lag time. It will do with keeping the local wisdom for keeping and increasing the welfare society sustainable for a long time.

The set of local wisdom on Percut Sei Tuan Village and Sei Nagalawan Village were not formed by their ancestors. The local wisdom was formed as time goes by, where the introducing process of the knowledge values of conservation bught by some non government organization that simultaneously gave learning to the formed groups.

The awareness of the importance of taking care the mangrove forestry will be automatically formed. It has been correlated with the life of community Nagalawan Village and Percut Village that life from the sea. The awareness is like replanting the mangrove trees from aome varieties as bakau, api-api, berembang, mata buaya, lenggadai. They were replanting the mangrove on the riverside to side of the Malacca’s straits.

The values of local wisdom that cannot be found in past time, now slowly but sure has been formed. There were trusted, cooperate, open minded, take care of each other could be the base to social movement comunally and massively. The formed of local wisdom was getting from the fishermen’s life experience with the coastal environment and the adaptation ability of the fishery comunity at Percut Village and Nagalawan Village. According to Steward (1995) there is the core of

culture system that very responsive to adaptation. So that, some adaptation process to ecology pressure directly will affect the core parts of a social structure.

If the change of culture happens caused of ecology factors, it can be productive while there must be an effort to replanning that affect to their social structure. The change of the culture simultaneously was brought by foreign people and fishermen through some conservation activities and empowering that doing particularly and collectively. In the growth stage, the fishermen were part of the group as “active and creative agents”. They can cause happened the transform of the environment and its community. Through the action of these agents, local wisdom was not only reproduced, modified, but also could create social rules that can be adapted with the existing condition.

CONCLUSION

1. The values of local wisdom on mangrove forest management that cannot be found on the past time, was slowly formed. There were trust, cooperation, open mind, helping each other, in order to managing mangrove forest sustainably.
2. Local wisdom was very potential to used as the stick for cooperation values, trust, open mind and spirit of helping each others in community. The values of local wisdom can be used for character building of coastal community to get better future in taking care of mangrove conservation.
3. The form of local wisdom was get from the life experiences of fishery community with the coastal environment, and the ability to adapt that was done by the community of Percut Village and Sei Nagalawan Village so they can struggle for life, where the cultural change simultaneously was brought by the external people and the fishermen through some conservation activity and empowerment that doing individually or collectively.
4. The formed of local wisdom as a part of reproduction process and culture modification that was introduced by create adaptive and up to date social rules.

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