

**MULTILEVEL CONFLICTS IN COMMUNITY BASED CORAL REEF MANAGEMENT SYSTEMS: CASE STUDY IN WEST-LOMBOK, INDONESIA**

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**ABSTRACT**

The article discusses the issue and complexities that arise when two sectors, fisheries and marine tourism, grow and imply for an institution governing coral reef ecosystem either government based or community based. Even though, a community-based management system is commonly recognized as a better way in governing the resources, the institutional performance of such model in the study area is still fragile. One of the factors affecting its fragility is multilevel conflicts, which lie at community level, district level, and national level. This multilevel conflicts occurs in various issues, especially resources ownership, fishery jurisdiction, and management authority.

**Keywords:** conflicts, property right, marine tourism, awig-awig, community based coral reef management

## INTRODUCTION

The paper discusses the issue and complexities that arise when two sectors, fisheries and marine tourism, grow and imply for an institution governing coral reef ecosystem either government based or community based. Community based management system is considered as a better way for management rather than conventional management. *Awig-awig*, which is literally means a local rule, is developed as a type of community based coral reef management in the study area. The analysis is based on the analytical framework of the institutional performance of such *awig-awig*, by which a coral reef ecosystem is assumed as a common pool resource (CPR) wherein the ownership issue takes place. Ownership issue is not free from conflicts that may involve local people and state, both the local government and the central government. The paper is based on case study in Gili Indah Village, West Lombok, West Nusatenggara Province, Indonesia.

Gili Indah constitutes a small island village (*desa*) that encompasses a cluster of three small islands or sub villages (*dusun*), they are Gili Air, Gili Meno and Gili Trawangan. Total area of Gili Indah is 2,954 hectares, with a main land area of 665 hectares. Gili Indah is under the jurisdiction of *Kabupaten Lombok Barat* (West- Lombok Regency), Nusa Tenggara Barat province. Gili Indah has 2,812 people, Livelihood includes marine tourism, fisheries, plantation and animal husbandry. In terms of economic revenue, marine tourism leads. However, in terms of labor absorption, fishery is still the mainstay of the majority. This area has 48 species of coral reefs and 70 species of coral fishes. Nevertheless, live coral reef coverage in the area is very low, with percentage coverage of only 5 to 20% throughout the study area. This shows that on average the condition of coral reefs in Gili Indah is degraded. Bappeda (2001) identified the causes leading to coral reef deterioration in Gili Indah as follow:

- 1) destructive fishing practices, including poison fishing and blast fishing,
- 2) anchoring, done by boatmen when dropping off boat passengers,
- 3) coral mining, where corals are collected and smashed for house construction and lime-production,
- 4) snorkeling and diving, by which the divers sometimes step on and slam their fins onto the coral reefs,
- 5) seaweed culture, wherein the coral reef clearance is required when seaweed culture facility is built,
- 6) *muroami*-net, by which the fishers often crash coral reefs with weighted lines festooned with brightly colored strips of plastic to scare the fish and herd them into the net.

The growth of marine tourism led to local people becoming aware of the need to conserve coral reefs. Increasing foreign tourists number in Gili Indah boosted the local economic growth, and local peoples think that what attracted the foreign tourists to visit Gili Indah was the beautiful coral reef ecosystem they owned. Increasing revenue contribution from marine tourism to local economy drew a positive response from many groups of local people, but was regarded as a threat by other groups, especially the traditional fishers operating *muroami*-net. For TEs, who run marine tourism business, the operations of *muroami*-net along with blast fishing are considered as destructive fishing practices that negatively affect the coral reef ecosystem. The local people who felt the positive impact of marine tourism were then committed to develop a local rule concerning coral reef conservation, called "*awig-awig*"

## ***AWIG-AWIG: COMMUNITY BASED CORAL REEF MANAGEMENT***

The awareness of the local people to conserve coral reef emerged when they realized that coral reef condition decline while marine tourism developed. With the COREMAP's (Coral Reef Rehabilitation and Management Program) facilitation, which was funded by international agencies, consensus building on *awig-awig* revitalization was held, and then *awig-awig* was devised. Beside COREMAP, the Bureau for Regional Development Planning supported such process through

formulation of the legal text of *awig-awig*, and eventually *awig-awig* was officially decreed by the Village Government and signed by the Regent. Based on monitoring and evaluation, *awig-awig* was modified in 2001.

Moreover, during the deliberation to establish *awig-awig*, territorial representation model was used rather than functional representation. Territorial representation refers to the situation where representatives are expected to speak for a particular geographical area, whereas functional representation refers to that the interest represented is a particular activities (Jentoft, 2003). With territorial representation, particular activities background of sub-village people involved in such consensus, such as if the people are fishers or not, was not considered. Even though, the fishers are the most affected people by the establishment of *awig-awig*. Accordingly, the voice of the fishers in devising *awig-awig* is less sound.

*Awig-awig* constitutes an institution for coral reef and fisheries management. Institution of community based management, commonly consisted of some aspects: territorial boundary, rules, authority, rights, sanction, and monitoring (Ruddle, 1999). We use some of them. *First*, *awig-awig* has a clear territorial boundary, consisting of the water area surrounding Gili Indah Village Island as far as 30-100 meters from the coastline. In principle, the territoriality of *awig-awig* is the water area wherein the coral reefs are found. The territoriality is then divided into many zones with different allotments. The boundary of each of the zones were bordered by physical marks, such as bungalows locations, trees, floating ball, buoys and other marks.

Second, is rule, which refers to prescriptions that forbid, permit, or require acts performed in relation to a right (Ostrom, 1990). Regarding resources management, the rules also covered when, where, and how the resources are appropriated. As an operational rule, *awig-awig* covers the following rules: (a) allotment of zoning into protective zones, buffer zones, and exploitation zones, (b) types of allowed and prohibited activities held in *awig-awig* zones, and (c) authorization and prohibition of activities. Destructive fishing practices, such as blast and poison fishing, however are highly prohibited, even though the local fishers are used to practicing them. This rule came up due to the increase of awareness of some local people over the coral reef conservation.

Third, is sanction. One of the sanction types over the violation of *awig-awig* are fines, ranging from US\$1.2 to US\$588. The money gained from the fines collected would be managed as income of the village. Besides fining, there are other sanctions types. For example, those who developed seaweed culture in a restricted zone would be sanctioned by having their seaweed culture facility destroyed on the spot. The more serious sanctions would be applied to those who held destructive fishing practices such as blast fishing, fishing using potassium cyanide, and coral mining. This level of sanctions is a confiscation of the fishing boat for a month, and eventually hand the boat over to the legal authority. The sanctioning over zoning rule violation is nearly invalid, whereas those over destructive fishing practices are still valid. *Security task force*, however, successfully dealt with 8 cases of destructive fishing practices.

The result is that not all of the rules can be well enforced. For example, zoning rules enforcement is applicable in Gili Trawangan only rather than Gili Air and Gili Meno, whereas prohibition of destructive fishing practice is enforceable in all areas. However, the fishers' compliance to this rule seems in instrumental sense rather than normative. The normative approach puts special emphasis on the fishers' internal incentives for compliance behavior (norms and values), whereas instrumental approach is based on external incentives (rewards and punishments) (Nielsen, 2003)

This is depicted by the fishers' awareness of that coral reef is an important ecosystem for sustenance of fishing itself, so economic gains of coral reef may be taken. However, some consider the risk of being violators. Nevertheless, monitoring and surveillance activities of *awig-awig* are still questioned by the fishers due to unaccountability of the task force personnel who are in charge of. Therefore, resistance from most fishers is still challenging. One of factors affecting such fragility is multilevel conflict.

## MULTI LEVEL CONFLICT

Different interests of the stakeholders may lead to a rise of conflicts, as Kriesberg (1998) stated that in normal social process among people or groups, there are incompatible objectives, and thus social conflict arises. To analyze social conflicts, we refer to the four types of conflicts as proposed by Charles (2001):

- a) *fishery jurisdiction* : conflicts lie at the policy and planning levels
- b) *management mechanism* : conflicts lie at the fisheries management level (from management plan to fishery enforcement)
- c) *internal allocation* : conflicts arise among direct users (fishers, processors, other users)
- d) *external allocation* : conflicts occur between internal fishery players and those outside the fishery system

In light of the four types of conflicts proposed by Charles (2001), we classify conflicts in coral reef management in the study area into two types: (a) external allocation and (b) fishery jurisdiction conflict, which lie at community level, district level, and national level.

### Community Level 1: Conflict of resources ownership between Fishers and Tourism Entrepreneurs

Referring to Ostrom and Schlager (1996) about rights classification, the local traditional fishers of Gili Indah actually used to own a set of traditional rights including access-right, withdrawal-right, management-right and exclusion-right within their traditional boundary. When marine tourism developed and *awig-awig* was established, the local fishers feel that their own set of such rights has been gradually undermined. For example, the newly-established *awig-awig* zoning system in fact restricts the scope of the local fishers' operational area. This means that the access and withdrawal right of the fishers has been adversely impacted by such *awig-awig*. Moreover, the tourism entrepreneurs (TEs) group gradually has become a leading group in holding these management and exclusion rights. Loss of the fishers' rights, however, leads to the marginalization of the fishers in their own area. This is a main issue of conflict at community level.

External allocation conflict involved the local fishers, especially *muroami*-net users, and TE, who run marine tourism business. The peak conflict between the *muroami* fishers and TE occurred in March 2003. The fishers were accused of carrying out *muroami* fishing in the restricted area in Gili Trawangan. Moreover, TE also questioned the operation of *muroami-net* because such gear could damage the coral reefs. In response to this case, TE reported "this fisher's violation" to the Agency for Natural Resources Conservation or *KSDA*, who is in charge for monitoring the conservation area. As a consequence to this report, *KSDA* then immediately handed over this case to the local police office. Nevertheless, the local fishers rejected the complaint of such violation because they thought that their operation was out of the restricted zone. They also felt that their *muroami*-net operation did not violate the law because they have got official authorization or fishing license issued by the Regency Marine and Fisheries Service Office (*Dinas Kelautan dan Perikanan*). This conflict between the local fishers and TEs actually is a latent or hidden conflict that arose since the establishment of *awig-awig*. It happened because the local fishers assumed that the rules within *awig-awig* is biased towards the marine tourism interest. The fishers felt that they are not beneficiary of *awig-awig*. The fishers, however, felt unfairly treated because their fishing area has been restricted by *awig-awig* so they cannot go fishing as far and wide as they used to.

As indicated previously, TEs originally are the former fishers who had achieved vertical mobility by running new business operations in marine tourism in collaboration with foreign investors. TEs had

their land as their equity in the joint business with the foreign investors. TEs and the fishers actually had the same background in terms of previous occupational status. They even have similar ethnic background because they originally came from *South Sulawesi* (i.e., *Bugis*, *Mandar*, and *Makasar* ethnic groups), so most of them are also bounded by a shared kinship. This proved that even if the community members are homogenous, it is not assured that social conflict could be avoided. In the other words, social or cultural homogeneity is not a main factor for successful implementation of resources management.

The above case eventually ended when conflict resolution was initiated. Legal authority initially tried to resolve the conflict between TEs and the fishers. Nevertheless, after considering that those involved in such conflicts were in familial relationship, the legal authority requested a mediation by the village chief, which was then conducted on March 5<sup>th</sup>, 2003. The meeting took place in the hall of Gili Indah Village Office, and was attended by the *muroami*-net fishers group, the *mogong* fishers group, and Eco-Trust as the representative of TE. In addition, chief of each sub villages (*dusun*) also participated. The meeting concluded with a new agreement agreed upon by both parties involved, i.e., the fishers and Eco-Trust, on behalf of TEs. The agreement is as follows :

- a) The *muroami* net is allowed to operate in one particular zone that is located surrounding Gili Trawangan. This zone is actually *out of awig-awig zone*,
- b) As a consequence of no-fish rules in the *awig-awig zone*, *Eco-Trust* has to provide a compensation fee for the fishers in the amount of Rp 3 million/month, and it should be paid on the 30<sup>th</sup> day of every month.

The new agreement also contains the sanctions for violations. In the new agreement the term “violation” referred to:

- a) If *muroam-net* is operated in the restricted zones
- b) If during the operation of the *muroami* in the assigned zone, the fishers use *pererek* (a kind of means to drive the fishes into the net)
- c) The basis of enforcement of “violation” rule was that at least two local people who had already admonished those violating the agreement should witness the violations.

In the new agreement, the sanctions can be classified into two conditions: when the fishers break the agreement, and when the Eco-Trust postpones the payment of compensation fee. The fishers accepted these new agreements, hereafter called the “new *awig-awig*”. With the new *awig-awig*, the zoning system of Gili Trawangan was revised.

## **Community Level 2: Conflict of Resources Ownership between Fishers and Central Government**

The marginalization of the fishers is also caused by the central government policy to develop Gili Indah as a Marine Natural Tourism Park (MNTP) and a Water Natural Conservation Area (WNCA). The Minister of Forestry Decree No 85 /Kpts-II /93 and The Minister of Forestry Decree No 99/Kpts-II/2001 respectively, promulgated these policies. The implementation of both policies are based on the National Government Decree No 68/1998 on Wildlife Reserve Area and Natural Conservation Area. According to this decree, this MNTP can be utilized for various purposes : (a) tourism, (b) research and development, (c) education, and (d) culture supporting activities. This decree seems centralistic, top down, and undermining the traditional or customary right.

To implement MNTP and WNCA policy, the central government developed the Agency for the Natural Resources Conservation (*KSDA*) as a representative of the central government. With this policy, a protected area is then determined and considered as a newly created state property right, even though this

protected area is overlapping with communal property right boundary, so such state property right area is undermined by the local fishers. Therefore, tragedy of the resources ownership is inevitable. Due to attempting to conserve the resources, the establishment of Gili Indah as MNTP prohibits all activities considered to be destructive fishing practices. This includes *muroami* net, which is commonly operated by Gili Indah fishers. Accordingly, *KSDA* attempted to prohibit *muroami*- net operation within Gili Indah area. This *KSDA*'s action is certainly synergetic to what the tourism entrepreneurs (TEs) group trying to enforce. As a result, the coalition between *KSDA* and TEs group leads to profound impacts on the loss of fishers' common property right. This tragedy of resources ownership eventually causes the fishers' resistance to MNTP and WNCA.

### **District Level : Conflict of Management Authority**

Due to the enactment of the Local Autonomy Law (*Undang-Undang* 22/1999), the local government gains the authority over the local marine resources. In line with this law, the local government considers that management of Gili Indah MNTP should be devolved to them rather than maintained by the central government. Nevertheless, the central government seems still reluctant to share the authority because they underestimate the local government capacity to manage and handle conservation matters (Satria and Matsuda, 2004). On the other hand, considering the commitment to implement the Local Autonomy Law, the local government through the Marine and Fisheries Service Office (MFSO) at Regency level (*Dinas Kelautan dan Perikanan Tingkat Kabupaten*) is confident to manage their coastal fisheries. MFSO's actions is issuing the fishing licenses for *muroami*-net. This implies that *muroami* net is allowed to operate in West Lombok, in which Gili Indah is located. The issuance of *muroami* license is based on the list of banned fishing gears released by the central government, by which *muroami net* is excluded. Prohibition of *muroami net* by *KSDA* on one side, and MFSO's action to legalize *muroami-net* on the other side exemplifies supra-community conflict, which can be categorized as "management mechanism and fishery jurisdiction conflict" (Charles, 2001) and "institutional conflict" (Bryant and Beiley, 2001). The conflict between MFSO and *KSDA*, however, also represents a conflict between the fisheries sector and marine tourism. This conflict certainly contributed to the rise of conflicts at community level. Both conflicts at supra-community and community level contribute to the fragility of the institution. Until now, the conflict at supra-community level is not resolved yet.

### **National Level : Conflict of Jurisdiction**

In higher level, these conflicts are exacerbated by the conflict between ministry of forestry and ministry of marine affairs and fisheries (MMAF) concerning authority on marine park. Before establishment of MMAF in 1999, the authority on Marine Park was under the ministry of forestry. Nevertheless, after MMAF was established, the ministry of forestry still has been reluctant to hand over the authority on Marine Park to the MMAF. Meanwhile, MMAF claims that authority should be under his authority because marine park is part of the marine ecosystem. This situation accordingly exacerbates the previous conflicts both in district level and in community level. On one side, tourism entrepreneurs, *KSDA*, and the ministry of forestry are in one alliance, while on the other side fishers, MFSO, and MMAF are in the opposite alliance. The external allocation conflict between fisheries and marine tourism involve multilevel agencies. As such, this needs more comprehensive resolution.

## CONCLUSION

Even though, a community-based management system is commonly recognized as a better way in governing the resources, the institutional performance of *awig-awig* in the study area is still questioned. We conclude that *awig-awig* is like pseudo CBM, and accordingly fragile to govern coral reef resources. The result shows that zoning rules is not enforceable, whereas prohibition of destructive fishing is enforceable, so this condition leads to institutional fragility of the resource governance. The main cause of such fragility is that there are multi-level conflicts among : (a) traditional fishers, (b) tourism entrepreneurs, (c) the central government (Agency for Natural Conservation), and (d) the local government. Traditional fishers, who have communal property right, are challenged by the central government policy to set Gili Indah marine area as a Marine Natural Tourism Park, a newly created state property right. To keep this policy, the central government made a coalition with local tourism entrepreneurs, who are mostly the former fishers, in against the traditional fishers who often break the zoning rules. Even though the local people have *awig-awig*, the traditional fishers group feels that *awig-awig* is undermined because zoning rules, for example, are bias to the tourism interest rather than fisheries. This conflict of property right involving traditional fishers, tourism entrepreneurs, and the central government is aggravated by the conflict between the central government and the local government concerning authority of marine resources management in Gili Indah. Based on the local autonomy law 1999, local marine resources management is under the local government authority, whereas the central government is still reluctant to share such authorities because the central government still underestimates the local government in conservation matter. The community level-conflict (between traditional fishers and tourism) is resolved by themselves through a compensation mechanism, while the supra community level- conflicts (vertical conflicts of property right and authority) still occurred.

To be a robust institution, *awig-awig* needs equitability among stake holders, functional representation for consensus building, and more participation of the fishers in all the process of *awig-awig* development. Furthermore, low intervention of the external agencies, devolvement of authority on marine conservation to the local government, and recognition to common property right of the fishers are also necessary.

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