

Maawu Dabau Bakuok (MDB): A Traditional System of Management for Fisheries in Bakuok Lake, Kampar Community, Riau Province

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1. Introduction

Indonesia follows a system of open-access fisheries and common property management, so that anyone can enter the fisheries without any restriction. This system has led to over-exploitation without any thought given to maximum sustainable yield. The users carry out destructive fishing for short-term profit. The result is environmental degradation and habitat destruction, and a fall in fishery resource potential. This has of late become a serious problem.

Fisheries management in Indonesia is centralised -- laws are issued by the government and implemented by fishers. This approach to management assumes that the villagers and the fishers have no ability to manage the resources and that the government must manage the resources (Ferer, 1989). Korten (1981) identified four reasons why centralized management was ineffective. These are : (1) limited scope, (2) no ability to tap local capacity (3) not compatible with the real needs of the local community and (4) making the local community dependent on the government.

Coastal and traditional fisheries management based on people's participation could at least solve the problem of enforcing regulations. The cultural factor in traditional regulations facilitates social control. Thus community participation could make management more effective. The system of fisheries management based on local community participation has been successfully applied by maritime countries such as Japan (Hasegawa, 1993; Hirasawa, 1993), South Pacific Island nations (Doulman, 1993; Hviding, 1991; Baines, 1989), the Philippines (Alix, 1989; Flores and Silverstre, 1987).

Traditional fisheries management in Indonesia has been established for a long time in both inland and marine fisheries. In Maluku, fisheries management is known as "Sasi" (Zerner, 1992, Nikujulu, 1994). In Bali, traditional management of coastal seaweed culture is known as "awig-awig" (Basuki and Nikijulu, 1996). In Aceh, the traditional law of the sea, Panglima Laut, stands for marine capture fisheries by the local community (Nurasa et al, 1995). Local management exists in the river and the lake area -- such as Lubuk Larangan in Sumatra and Central Kalimantan (Wahyono et al, 1992).

The capture system in Bakuok Lake was established a long time ago. Bakuok is a small lake 45 hectares wide. The lake lies on five villages of Tambang District, Kampar Regency. Tribal chiefs (nirik mamak) explained that Bakuok Lake was made by cutting the Kampar river bend. During the days of Dutch colonialism, fish catch from the lake was used for taxes (local name : "belatun"). Till now no rules exist for Maawu Dabau Bakuok (MDB), but the local community obeys regulations. Although the system of regulations has been running well, an evaluation of MDB would be in order in the interest of future fisheries development.

This paper results from a research survey conducted in September 1998 in Tambang District, Kampar Regency. Interviews were done with tribal chiefs, the head of Aursati village, the head of Tambang village and local communities. Fifteen respondents provided inputs. Other information was collected from the tourism office, the fisheries office, and others.

The study focused on two factors: essential and optional. The essential factor may be regarded as institution-based. Basically, community-based resource management (CBRM) focuses on shared norms and objectives and on consistent adherence to some socio-economic goals. The optional factor of CBRM is the organisational structure which may change repeatedly, depending on roles accepted and recognised by the society.

2. History and Development of MDB

Customs and traditions play an important role in dictating behaviour in Riau Province. This is very true of the Kampar community that is based in Riau. People who live near the border of West Sumatra practise customs

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and traditions similar to those of the Minangkabau community. People who live near North Sumatra have customs similar to those of the South Tapanuli community. People who live in the coastal areas have Melayu customs.

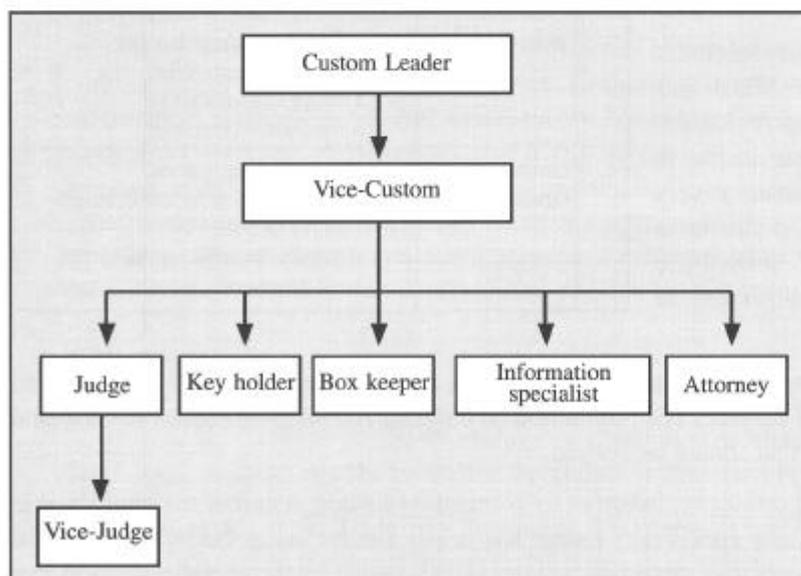
In the colonial era, people took freely to fishing. The absence of regulations caused quick depletion of the lake's resources. The use of explosives and poisonous methods of fishing aggravated the problem. In 1970, tribal chiefs initiated discussion on how to fish without damaging the resources. Result: the local community was prohibited from catching fish for one year (closed season). Tribal chiefs, together with the local community, determined the duration and timing of the open season. This practice was referred to as Maawu Danau Bakuok or MDB, meaning "catching the fish together".

In earlier years, the open season was inaugurated on the first day of Muharram. In 1990, the open season began on Independence Day, 17 August. Fishing was done at the end of the dry season (September-October). The water surface level is usually the lowest during that month. An announcement about the beginning of the open or capture season is usually made by village office staff, mosque leaders, etc, about a month in advance. The MDB is preceded by a celebration of traditional dance and music -- pencak silat rebana, talempong.

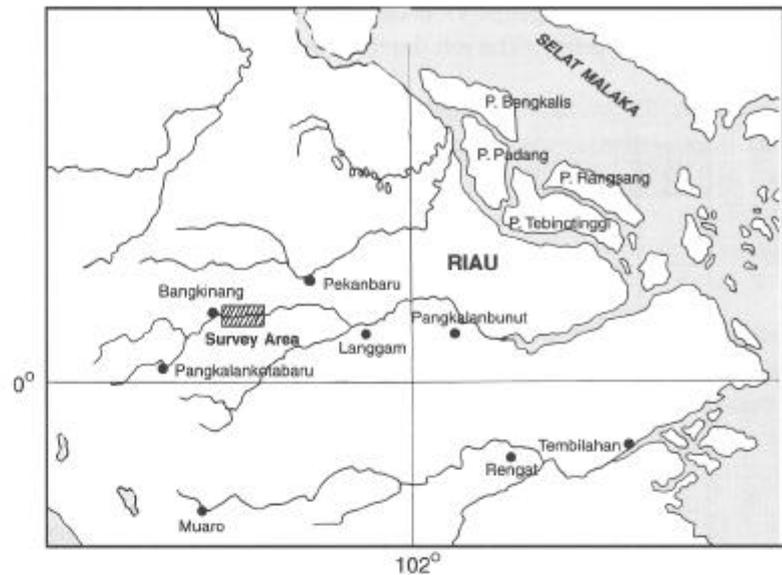
3. Organisation of MDB

"Maawu" means joint fish capture by the local community. The maawu decision is taken by the tribal chiefs. They represent nine ethnic groups organised by "pucuk adat" or the custom leader. MDB is part of a whole system of regulations that consists of three law groups such as:

- * The Law of Sigomo-Gomo: concerns interactions with the public. People who violate the provisions of this law will be warned by tribal chiefs; no punishment.
- * The Law of Sediolamo: prevailed a long time ago. People who violate it are expelled from the clan and community.
- * The Law of Ber samo-samo: is applied if other laws do not solve a community problem. The chiefs must meet and decide to apply the law in a particular case. This law is very flexible, it can be eliminated if not valid or necessary any more.



Map of survey area



MDB is part of the law of Ber samo-samo. After the 1970 discussion among tribal chiefs, the MDB regulation was put into place. Implementation is by the tribal chiefs.

As a local institution, tribal chiefs have five village authorities organised not on the basis of administrative area but on the basis of the number of ethnic groups who live in the area.

4. Organisational Structure of Tribal Chiefs in Tambang District, Riau

The custom leader and vice-custom leaders exercise authority over the nine tribal chiefs. Other members command expertise in a certain field. The

organisational structure is a functional line rather than a command line. In some cases, a custom leader cannot take a decision against violators, the case should be handled by an attorney. Later, all the tribal chiefs take the case to a meeting. The job description of tribal chiefs is set out in Table 1 below.

Table 1. Job description and ethnic group of tribal chiefs

No	Position	Ethnic group	Job description
1	Custom leader or Pucuk Adat	Domo	To organise all meetings and take decisions on all problems
2	Vice-Custom leader or Wakil Pucuk Adat	Malayu	To assist the custom leader
3	Judge or Hakim Negeri	Putapang	To lead the custom judicature
4	Vice-judge or Wakil Hakim Negeri	Billang	To assist the judge
5	Key holder of Pemegang Kunci Peti	Mandailing	To serve as a key keeper for heirloom boxes
6	Box keeper or Penyimpan Peti	Chaniago	To serve as heirloom boxes keeper
7	Information specialist or Suluh Bendang	Melayu Simpang	To run an information service
8	Information specialist or Suluh Bendang	Bealing	To run an information service
9	Attorney or Penyiasat/Penyelidik	Melayu Kampung rajo	To investigate cases

Usually a person appointed as a tribal chief remains so for life. On his death, he is replaced by a person from the same ethnic group. The do's and don'ts for tribal chiefs are as follows:

- No stealing
- No sexual intercourse before marriage
- No intentional killing
- No intentional poisoning

If the tribal chief violates the above stipulations, he will be suspended and expelled. The other prohibitions (they attract light punishment) are:

- Telling a lie
- Failing to keep a promise

If the tribal chiefs violate any of these dicta, they have to surrender a buffalo as fine or penalty.

5. Institutional Base

The objectives of MDB are to protect fishery resources from over-exploitation. Actually, the MDB was established a long time ago. In 1970, it was revitalized with new regulations, as a response to the decline in the lake's fish resources. The local community is very compliant with the objectives, norms and structures of customary management. Table 2 shows the institutional base and organisational structure of the MDB.

Table 2. Institutional base and organisational structure of MDB, Tambang District

No	Description	Explanation
1	Objectives	<ul style="list-style-type: none"> - To protect resources from over - exploitation - To protect tradition
2	Shared rooms	<ul style="list-style-type: none"> - No structures are permitted within a distance of 20 m from the lake - Catch of fishes in the lake is forbidden - Fishing may be allowed after approval from tribal chiefs - MDB is determined on the basis of decisions by tribal chiefs
3	Behaviour	<ul style="list-style-type: none"> - Local community has the first right to catch fish - Fishing is preceded by a traditional ceremony
4	Organisational structure	<ul style="list-style-type: none"> - Unwritten regulations - Implementation by tribal chiefs - Control of MDB by Attorney, assisted by the local community

Only two kinds of fishing gear are allowed in the open season - throwing net and scoop net; while only one kind of trap net can be set at the end portion of the lake. The prohibition on building construction around the lake and catching the fish before MDB is a norm that should be obeyed.

The open season begins with a traditional ceremony, followed by community fishing. A part of the production is consumed. What remains is sold in the lake area. Every owner has to pay tax for using the boat. The local community has priority over catch; outsiders may catch fish without using a boat. Organisational structures that

relate to control and surveillance are created by tribal chiefs and village leaders around the lake. Villagers violating these regulations are punished according to regulations.

6. Implementation of MDB

Fishing in the lake is prohibited. Financial, rather than social sanctions are applied for violations. These include confiscation of boats and gear, and fine in the form of a goat. The boats, the gear and the goat are then sold. The person guilty of the violation loses half of the proceeds of the sale, it is handed over to the custom treasury. He gets to keep the other half. The tribal chiefs may modify the sanctions or penalties for violations after discussion among themselves. During the past 10 years, six violations and disputes have occurred. One person was arrested; the others had to surrender their boats as penalties.

Closed season would be declared after fish schools come from downstream for spawning. According to the tribal chief, fish schools spawn upstream. Meanwhile a part of the fishes enter the lake. A closed season would be indicated by sugar palm leaves fastened to a big tree near the lake. A closed season is also publicly announced in the mosque, at village offices and at every meeting. In general, an open season lasts one to three months. It also depends on fish schools coming upstream. During that time all MDB regulations are applied.

7. Evaluation of MDB

The performance of MDB could be evaluated on the basis of three criteria: efficiency, sustainability, and equitability. Table 3 explains the performance of MDB during 1998.

Using the yardstick of efficiency, one notices a moderate MDB performance in terms of fish production increase and a good performance in terms of price rise (significant price rise). The criterion of sustainability: As regards gear selectivity and restocking, the performance has been good. So is the case with "social identity" and "harmony with local culture". On the other hand, in the matter of "consistency with local aspirations," success is low because tribal chiefs of the area cannot meet all local aspirations. The local community wants all the fish produced just for them. As for equitability, the performance has been good because access to resource use has improved and local employment opportunities have expanded.

Table 3. Performance of MDB in Tambang District, 1998

No	Criteria	Performance
1	Efficiency:	
	Increase production	xx
	Increase price	xxx
2	Sustainability:-	
	To sustain bio-diversity	xxx
	Social identity	xxx
	Harmony with local culture	xxx
	Consistency with local aspirations	x
	Containing social conflicts	x
3	Equitability:-	
	Access to resource use	xxx
	Local employment opportunities	xxx

Source: Interviews; Remarks x: low; xx: moderate; xxx: high

8. Conclusions

MDB is part of a customary law which was established a long time ago and stands to this day. MDB regulations have undergone some reform. Regulations concerning fines and penalties and fish capture are new elements in the customary law that came into being in 1970. The regulations have to be in harmony with community tradition. Although MDB as customary law is ancient, some external elements have been introduced into it. The MDB tradition has become one of co-management. Cash penalties and confiscation of fishing gear have been a part of enforcement regulations. Social sanctions are not applied any more. Regulations must be in harmony with community tradition. Implementation of MDB has been good from the standpoint of efficiency, sustainability, and equitability. As regards the criteria of sustainability, success in meeting local aspirations seems to be low. The regional government, especially Kampar Regency, has to look for opportunities to extend this system to other areas. Possibilities are excellent because of the many lakes in this area. The local community should take the initiative in planning and implementing regulations. Co-management should be applied.

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