

CONFLICT OF AQUATIC RESOURCES AND ITS UNDERLYING CAUSES: A CASE STUDY FROM DONAN RIVER AREA, SEGARA ANAKAN REGION, CILACAP, CENTRAL JAVA

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ABSTRACT

This research aimed to know internally conflict on the use of aquatic resources at around Donan River, Segara Anakan region Cilacap. Using on fisheries resources was not free against potential conflict among the user or with its interest's one related to that resources. The lack on capability of identified conflict would be a limiting factor for the implementation on the fisheries resources management program. The research was hold in the region of Segara Anakan, Donan River from August until October 2005. The data collection techniques applied in this survey included questionnaire; observation; in-depth interview with leaders of fisherman organizations; and focus group discussion. Quantitative data was analyzed by descriptive statistics. The research showed that fisherman's community along Donan River line were not out of inside potentially conflict among inter micro-micro, intra micro-micro and intra micro-macro. This potential conflict were appeared because of presence on the different perception belong to its authority access against Donan River and their open system on the fisheries resources management.

Keywords : Conflict, Donan River, Aquatic Resources, Fisherman Community

INTRODUCTION

According to Hardin (1968), the common use of natural resources can bring about over-exploitation since the resource-users are so individualistic that the "tragedy of the commons" takes place. No one has the incentive to protect common resources from over-exploitation Agrawal (2001). Instead, many common resources were gradually converted into open access ones in which the rules of capture drove each to get as much as possible before others did. In many areas, all communities will be confronted with collective action problems as they use a common resource (FAO, 2000).

In Cilacap, Donan River has been used in various interests for a long time. *Apong* net

fishermen, industries, port management and ordinary fishermen are found to be users of Donan River. *Apong* net is a kind of modified trawl that actually has been banned by the government since 1980s because its practices have led to over-fishing practices. After the ban, the fishermen using the river for their main livelihood source adopted *apong* net in order to replace their traditional fish trap net. Because of more productive compared to their traditional fish trap net, the use of this *apong* net became popular in 1990s. Conflict arises because practices of *apong* net have impeded interests of other users such as sea fishermen, industries and port administration. Placement of *apong* nets along Donan River has hindered the ship transportation traffic of industries as well as port users. For ordinary fishermen, *apong*

nets are responsible for fish scarcity in ocean since they catch most of fish seeds. These conflicts have led to a huge problem for creating a sustainable *Donan* River management.

To overcome these river use conflicts, some efforts have been undertaken. The Government of *Kabupaten Cilacap* has issued District Regulation No. 16/2001 on Conservation Zone in *Segara Anakan* Area including *Donan* River. One of Chapters of this regulation governs license of *apong* net ownership in order to minimize the conflict as well as over-fishing since *Donan* River is a nursery ground as well as shipping line for some industries. However, disturbance frequency due to *apong* net practices keeps taking place instead of decreasing the conflicts and over-fishing. According to survey, the number of *apong* nets impeding ship traffics has increased approximately 11 folds in the year of 2001 – 2004 (from 12 to 131 nets). Other efforts are undertaken by Cement *Cibinong* Company by launching some community development programs such as fishery culture, provision of alternative net (*sirang* net), and poultry. The main aim of these programs is to facilitate *apong* net fishermen in order to alter their job.

Again, these efforts found to be failure to handle the conflicts. Responding to these government and industry failure in handling the conflict, *Jenderal Soedirman* University currently facilitates various parties involved in the *Donan* conflict through the framework of **Tripartite Cooperation Program** in the beginning of 2005. The Program develops a consensus building approach among conflicting parties. The

Tripartite Cooperation Program consists of collaboration among university, local government and industries.

Based on *Hardin's* theory, the important question arising in this research is why the common use of *Donan* River has led to the conflict among its users. Using the framework of *Warner* (2000), this research tried to map the river use conflicts and to formulate a possible conflict resolution in the *Donan* River area.

METHODS

Research was undertaken in four villages existing along *Donan* River. The four villages was selected based on purposive sampling since results of pre-survey in 9 fisherman villages found only four villages that more intensively use *apong* net than the rest. They are *Kutawaru*, *Donan*, *Karang Talun* and *Tritih Kulon*.

Research was focused on household level as a unit of analysis. Respondents were selected by proportional random sampling in terms of *apong* fisherman density in each sample villages. Taking into account efficiency and representativeness, this survey proportionally took 30 percent of households to be respondents from each sample villages. The data collection techniques applied in this survey included questionnaire; observation; in-depth interview with leaders of fisherman organizations; and focus group discussion. Quantitative data was analyzed by descriptive statistics, while qualitative data analysis used an interactive model with the

following procedures: data collection, data reduction, data display, and conclusion drawing (Miles and Huberman, 1990).

RESULT AND DISCUSSION

Apong net started well known by fishermen community which lived along *Donan* River since 1980's before the use of tiger prawn banned by government. Formerly the society used *sero* or *tadahan* as the tools to catch the fish. *Sero* is made from bamboo or wood which placed in the river edge as a media to trap the fishes which are brought by the river flow. Meanwhile, *apong* net is the modification of tiger prawn net. If formerly tiger prawn net was put in the ship which sailing to look for the fish, so that a lot of coral reef destruction because caught by this prawn. After the ban was issued, some fisherman returns to operate this net with small changes. If formally it was put in trawl ships so it moved according to ship channel, so after being *apong* net, this net become such river barrier, so every material which moved which follow the river flow will be trapped on the net.

Apong net for the first time was developed in Kutawaru village. It was Purwadi (an informal leader) in 1982 with his work experience in Jakarta found a lot of weaknesses from *Sero*, such as it was broke easily if hinted by the fast current and less of catching results. Through trial efforts, He put tiger prawn permanently to replace *sero*. Unfortunately, his effort has not gained maximum results. But tiger prawn as an alternative tool to catch beside *sero* then it developed rapidly after the

existence of government banning toward tiger prawn use in open sea. In its development, the society is able to catch much more as they use tiger prawn, which is well-known as *apong* net, in comparison with *sero*. According to survey, the maximum catching results as using *sero* only amount to 25.000 *rupiah*. When they use *apong* net, the earnings reach until 100.000 *rupiah*. According to Widodo (an influential *apong* fisherman), before *apong* was developed the catching results were less. After *apong* nets exist, the fisherman economical condition is getting better. Formerly, they only afford to buy the bicycle, now they are able to buy motorcycle. In addition, they can improve their houses, for instance, from *gedek* (bamboo-made wall) to permanent wall.

The practical use of *apong* net diffused into few villages along *Donan* River. Its development is becoming massive, and then it has already led to decreasing or even stopping traditional catch techniques like: fishing, *mintur* or *madong*.

Viewed from the typology of resource property, *Donan* River includes the kinds of sources which is owned together (common property). It is because *Donan* River has been long time used together by fisherman society which lived along the river as a main source to support their economical life. The society use *Donan* River to catch any kind of fish by using *apong* net. The fishes that they catch includes: *jari* shrimp, *peci* shrimp, tiny sea fish, *belanak* and *rebon*.

To arrange *Donan* River use, the society formed fisherman organization which is

structurally affiliated to the Indonesian Fisherman Association Organization (HNSI). The chief of fisherman organization is elected by its members of fisherman on the basis of trust and able to accommodate aspiration and fisherman interest.

Culturally, the society saw the chief just like their father who able to “guide” its children. Therefore, all the time the chief represent its members in every forum which become the interest of its members always voiced and struggled.

In managing *Donan* River use, the prevailing norm system is not too complicated. Every body, which lived on inside and outside the village, is able to use *Donan* River as long as they has already got permission from and gained agreement by the fishermen which has existed already there. Thus, a fisherman who would put the poles and *apong* net should be agreed first by the others fishermen especially whether the place of new *apong* net is not disturbing the activities of others fishermen which has already existed there. If it is considered as disturbing the others, then the new fisherman is banned to put the poles and his net. So far, the conflict intensity between fishermen particularly in putting the poles and *apong* net in *Donan* River territory is at low level.

Even though some restrictions have been applied by *apong* fishermen, there were some *apong* net owners coming from outside the village. The interesting things is that the development of *apong* net number which increase year by year have caused “parceling of land” of *Donan* River. The

land parceling of *Donan* River territory was unavoidable because the society competes to get the location of poles placed which were predicted to become the source of fishes. The placement of *apong* net formerly in the edge of river moved to the middle of river flow slice with the increasing of society interest to use *apong* net. In its development, the locations which tend to middle are considered as the more strategic place compared to the edge of river. It is because the current in the middle is more rapid compared to the edge so it can bring any kinds of fishes which are able to be trapped in *apong* net with relatively bigger amount compared in the flow of the edge.

The characteristics of *apong* net which is valued efficient from time and cost have encourage higher enough society attention to compete in placing *apong* net. The working field which is getting scarce has also encouraged the activities of *apong* net to become the main choice of society to support their economical life. Even though not all placement of *apong* nets gives satisfaction results, some people own *apong* net more than one. Even there were some members who already bequeathed its poles to their children who have already own family. Or there were also who sold the poles location to others parties interested in investing *apong* net. The interesting thing is that the placement of poles undertaken by someone will be socially admitted by others *apong* fishermen. In other words, the poles are considered as a property right. Therefore, the border of land parceling who is owned by *apong* fisherman has determined his property clearly and guaranteed free from disturbance of other

parties. Even though there were no written law, every fisherman would respect the others poles ownership. This means that no one will try to remove or even block the poles with his poles. Thus, the border fishing catching property area is becoming much clearer.

From the explanation above, the characteristic of *Donan* River as common property has changed into private property. Therefore, it brings big enough consequences in property rights. An *apong* net fisherman is not only able to ruled the river area with the poles, but also able to sell, to rent it even bequeathed its poles to others parties. Even though the management of *apong* net uses in an area or village is still controlled by a fisherman organization as the authority source of *apong* fisherman society.

The conflicts of using *Donan* River rise up as the users are not only dominated by *apong* fishermen. The development of Tanjung Intan harbor as an international harbor as well as some industries in Cilacap also increases the uses of *Donan* River to support their activities. The more crowded ship harbor and industry ship traffic demand for a secure sailing line from all kinds of distraction. The increasing use of *apong* net in along flow of *Donan* has become a threat for industry and harbor parties. While for some *apong* fishermen, the ship traffics in the river flow have disturbed many people which have already existed for long time. Ironically, the government intervention through Law No. 16/2001 has not showed effectively in managing the uses of *Donan* river flow for common interest because of

decreasing government credibility and legitimacy after reform era.

From the analysis above, there are some conflict types which occur in *Donan* river flow. Using the framework of types of conflicts arising in natural resource management developed by Warner (2000), the *Donan* conflicts are divided into three conflict level. First, intern micro-macro conflict, which is one occurring at internal level of *apong* net fisherman community itself. There is some conflict phenomenon which can be identified as follows:

1. Some *apong* fisherman is hard to be controlled by the chief of fisherman because of placing of *apong* net in ship traffic line.
2. The competition among *apong* net fishermen in finding poles locations which are considered as fish sources.

In the first conflict, the authority of chief of fishermen was limited in managing the development of *apong* net but unable to disciplines the member of *apong* fishermen who put poles and their net in sailing line area. Meanwhile in the second conflict, there are some not satisfied from few fishermen toward informal rules which are agreed in *apong* fisherman community that the new *apong* placing is able to be placed as long as it does not disturb *apong* activity existence and should get approval from others which is in one line.

The second type of conflict is inter micro-macro conflict, which is conflict between *apong* fishermen with open sea fishermen. In this conflict, the open sea fisherman felt loss with the increasing of

apong net number in *Donan* River area. They claim that the decreasing number of fish in the open sea was because the impact of the exercise of catching fish by using *apong* net. According them, *apong* net had killed the baby fish and hamper the development of any kind of fish. In a few meeting forum which involved few parties, open sea fishermen often stated their complaint to the regency government to quickly solve *apong* problems.

The third type of conflict is micro-macro conflict, which is conflict between *apong* fishermen with other parties like Cilacap local government, Tanjung Intan harbor administration, Pertamina (national oil company), and Cement Cibinong (now Holcim Ltd) company, as well as sea security apparatus. Against Cilacap local government, *apong* fishermen felt that government never involved them in formulating the local law No. 16/2001. Indeed, the government ever asked a few chief of fishermen to count the number and the place of *apong* net, but then government left the role of fisherman organization in local law making. As a consequence, most of *apong* net fisherman didn't know about local law No. 16/2001 governing *apong* property license.

The local government also faces a heavy challenge from *apong* fishermen demands in order to compensate their *apong* nets which is equal to current price of net and provides alternative jobs for them if *apong* net practices are really prohibited. Such demands can be realized by the local government because of very limited government budget. Against Pertamina

party, beside because of Pertamina ship traffic which a few time causes broken-*apong*, Pertamina waste is claimed as a cause of the lost of few kind of fish and the decreasing of fish catching results using *apong* net. While against Cement Cibinong Company, the complaint that *apong* fishermen arise is the frequency of ships or *tongkang* of Cibinong hitting their *apong* net. For Cement Cibinong party, the sporadic placement of *apong* net in shipping line has caused the increasing of transportation cost and hampered production process because of the slowness of material supply to the processing location. Whilst, against harbor administration party, *apong* fishermen complain one side action from harbor party which diffused the sailing line without acknowledged by *apong* fishermen. In harbor administration point of view, *Donan* line area is their authority area or their work field area so it no need even no obligation to be acknowledged by others parties. Moreover, the management of sailing line has been guaranteed by the national sailing law. The other conflict phenomenon was the one between *apong* fishermen and sea security apparatus. The action of taking out *apong* net in the sea security operation was considered only to awake the tenses between *apong* fishermen and security apparatus. According to *apong* fishermen, they often does not obtain the information about sailing line cleaning from *apong* net so some fishermen felt loss because of those operations. Beside that, the labeling of "society disease" to *apong* fisherman community by security apparatus in some meeting forum had caused society

touchiness. These practices not only preserve the conflict that has developed for a long time ago, but also contra productive for the cooperation building from the parties involved in arranging sustainability of *Donan* River line.

CONCLUSIONS

Some conclusions than can be drawn from this study are:

1. Institutional changes from common to private property are found as a root cause of the *Donan* River use conflicts. Most of people living along *Donan* River are highly dependent on *apong* net practices for their main livelihood. *Apong* net itself was development of *sero* (or *tadahan*) and modified trawl (tiger net) that was then adopted by *Donan* fishermen because of more efficient and productive. Since *apong* net changed *sero*, the river had been fragmented quickly into individuals' property. The local social norms also accepted and even supported these changes. Conflicts arise as industries and port activities developed and used the river for their sailing line.
2. Law enforcement in forms of national and local government regulation which aims at governing sailing line using river is found to be ineffective. In addition to civil inobedience, law enforcement suffers from decreasing government legitimacy and credibility because of government crisis after reform era. Therefore, any law enforcement to govern river uses is difficult to implement.

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