

# Continued Multiparty Collaboration Model in Crab Fisheries Management

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**Abstract-** This paper highlights the importance of managing collaboration crab fishery, which is an asset of development, so it can be used together to maximize the participation of all stakeholders. Collaboration includes a complex and multidimensional relationship which includes the social, economic, cultural and technical management of the run from upstream to downstream. Altogether seen in a unity mutually crochet hooks. Based on the concept that it is necessary to design a model of collaborative management in an integrated manner that can run in a dynamic and continuous process which will benefit all stakeholders which include fishing communities, government and the business world (employers swasta). Several studies have stressed the importance of sustainable crab fishery management based multi-stakeholder collaboration within the framework of the system. Several important issues in the management of crabs is the exploitation that goes beyond the biological limits of the maximum, which is not optimal arrests resulting in lower catches of fishermen in terms of both quality and quantity. This raises the systemic impact indirectly on businesses crab and indirectly on the government. If this situation continues then the losses will be borne by the Indonesian nation is not only socially but also economically and politically.

**Index Terms-** models, management of sustainable fisheries, crab, based collaboration

## I. INTRODUCTION

So far studies on sustainable crab fishery management based multi-stakeholder collaboration within the framework of the system has not been done. Similarly, the mapping of the degree of influence and interests of the parties involved in the management of crabs, as well as the multi-stakeholder contribution to the collaborative effort crab fishery management. The study on the sustainability of small crab fishery-based multi-stakeholder collaboration, will contribute in resolving social conflicts and an increasingly alarming conditions crab.

Based on the research report Sulistiono, et al. (2009)[1] reported that the optimum level of arrests carried out in the waters north of Java (Panimbang, Labuhan, Serang, Cirebon, Rembang), western Sulawesi (Barru, Maros), Nusa Tenggara Barat (Gulf Bima) has exceeded a limit of about 113.68 percent, whereas the level of resource utilization optimization crab in these waters amounted to 43.10 percent. This phenomenon is real perceived by the decline in catches of fishermen in terms of both quality and quantity.

A decrease in the catch of the impact on the decline in the supply of raw materials to be processed into export products. Overall, the production of crab in Indonesian waters began to show a decline in 2004 (Juwana, et al., 2009)[2]. Statistical data of fisheries South Sulawesi province showed an increase crab production in 2007 - 2009, but the year 2010 - 2012 decreased despite increased production values (Table 1). According to the chairman of the Indonesian crab Management Association (APRI), scarcity of raw materials has forced some crab processing plants closed. Of the 24 crab processing company in the country, now lives 12 companies that are still operating. This figure continues to decrease with continued reduction in sea crab population.

Systemic effects arising from this situation will directly concerning businesses crab and indirectly on the government. Therefore the experts (conservationists) marine and fisheries make efforts to resolve this issue. Appears various alternative fisheries management models developed. One of them is the collaborative management model.

Collaborative Management refers to a mix of formal rules of government and the traditional rules of society, and therefore the co-management of fisheries can be interpreted as the division or distribution of responsibility and authority between the government and local communities in managing fishery resources. Based on this definition, the government and society are responsible together in conducting all phases of fisheries management. With this model the expected conflicts between fishing and the degradation of fisheries resources as one of the descendants of the problem of centralizing the management of fisheries - an imbalance between the state's role and the role of communities in fisheries management can be overcome (Adrianto 2011; Alains, et al., 2009)[3,4].

During the regime of management of fishing is likely to be open (open access) that anyone, anywhere and anytime fishermen can freely exploit marine fishery resources, without there among users (stakeholders) is responsible for its preservation (Christy 1987; Christy and Scott 1986)[4,5]. With practices that are free so it was causing pollution and damage to coastal ecosystems, which marked the occurrence of symptoms of overexploitation (overfishing) in several areas of coastal waters, destruction of coral reef ecosystems as a result of fishing practices that damage (bombing), the destruction of forest ecosystems mangrove, the use of fishing gear that is not environmentally friendly such as trawling, and other coastal environmental pollution (Dahuri 2003; Bengen 2002)[6,7].

According Alains (2009)[8] management and utilization of fishery resources tend to dwindle due to the interaction between

people more expressed in the form of mutual competition rather than cooperation. Mutual competition in the use of fish resources is the reason for the failure of fisheries management shown by the destruction of resources and the existence of poverty. However, mutual interaction between people can be seen as well as the potential that can be developed to formulate a mechanism for the effective management of fisheries resources.

Crab fishery own collaborative management to address the issues that the crab fishery as a development asset can be utilized together with maximizing the participation of all stakeholders. Collaboration includes a complex and multidimensional relationship which includes the social, economic, cultural and technical management of the run from upstream to downstream. Altogether seen in a union that is intertwined. Based on the concept of the system that it is necessary to design a model of collaborative management in an integrated manner that can run in a dynamic and continuous process which will benefit all stakeholders which include fishing communities, government and business (private employers).

## II. SOME PROBLEMS IN CRAB FISHERIES MANAGEMENT

Crab fishery management that has lasted more than a decade, has involved many parties with diverse interests. In the interaction of the parties consciously or not, do the competition in the fight for its interests. It encourages the exploitation of crabs. Currently crab already in a state of overfishing, but exploitation continues to occur even more worrying when the various parties (state, private, and community groups fishermen) has sought to overcome them, in order to realize a sustainable crab fishery.

The main problem appears in the management of crabs which are less obvious the process of participation and cooperation among stakeholders involved in the crab fishery management (state, private entrepreneurs, and community groups of fishermen). Management visible only by Department of Marine and Fisheries so impressed is top down, one-way, less motivating people to participate and less integrated.

Such conditions if explored more deeply through the focus of the problem is: **first**, during this multi-stakeholder involvement uncharted properly according to the interests and influence on the sustainability of the crab fishery. Stakeholder interests can be seen from the motive behind his involvement in the management of crabs, the benefits of what is expected, how close the stakeholders on the management of crabs, means whatever is important to be applied to fulfill his desire in this management, and how the position of stakeholders in the management of small crab fishery. While the influence of stakeholders can be seen from the ability to build stakeholder opinions / ideas, the ability of stakeholders to give sanctions / threats or power coercive stakeholders, how high the level of legitimacy / stakeholder leadership in the management of crabs, the ability to compensate in the form of material / incentive or utilitarian power stakeholders. Similarly, the network of stakeholders, such as the number of networks, form a network, the network level and the functioning of the network. **Secondly**, it is not clear what kind of competition among the parties involved in the crab fishery management. Is that a form of

competition in the process of multi-stakeholder interaction leads to conflict or collaboration. **Third**, information on the role of stakeholders in the crab fishery management is not clear. Similarly, regarding the sharing contribution of stakeholders in the crab fishery management has not been portrayed.

Observing this, we need a model of management strategies crab integrated, which blends harmoniously inter-element (the) community of fishermen, the fishery, and the government in order to: (1) Increasing public awareness of the importance of resources crab to support life, (2) Increase knowledge and ability of people, so that they can participate in each phase of the management of crabs in an integrated manner, (3) Increase the income of the people with other forms of utilization of fishery resources crab optimal and sustainable through fishing activities so as to provide benefits to people in the present generation and that will come, without losing its ecological function

## III. MULTIPARTY COLLABORATION BASED SUSTAINABLE CRAB FISHERY MANAGEMENT

### a. Multiparty Competition

In the context of fisheries, seafood is a source of natural wealth for grabs in order to meet the demands of public life. Efforts greater exploitation of the sea and into the economic chain as the natural wealth of the land that is thinning. Thus, the competition to be able to exploit the sea was not inevitable. The diverse interests of the various stakeholders consulted in Exploiting marine areas. Of stakeholders in that it covers all parties involved in the management of marine resources. Stakeholders include everyone from local and national politicians and community leaders, rulers, paramilitary groups, NGOs and international agencies. If related to the management of the crab fishery stakeholders involved include local authorities, Department of Marine and Fisheries, entrepreneurs (exporters) crab, collectors (baskets), crab fishermen, NGOs in the field of environment and consumer services, as well as financial institutions. According to Karl Marx in Poloma (2007)[9], that (stakeholders) that is different is the decisive factor for the creation of social conflict. Fahmid (2013)[10] states that social conflicts due to competition among actors to control the political and economic power, there is a conflict in the form of open and covert conflict.

Referring intensively on Knight, et al. (2002), identifies at least there are four kinds of conflict fishermen based factors. First, class conflict, namely the conflict between social classes of fishermen as a result of the dominance of capital enterprises and traditional businesses, such as conflict or a mini trawl fishing in the local language known pattarik or pa'renreng (upscale) with small fishing (lower class), which is similar the category of conflict its war gear Charles (1993).[11]

Second, the conflict orientation, is the conflict between fishermen who have different orientations in resource utilization, namely between fishermen who have concern for the ways of resource use environmentally friendly (long-term orientation) by fishermen who use activities that are damaging the environment, such as the use of bombs, potassium, etc. (short-term orientation).

Third, the agrarian conflicts (fishing area), a conflict that occurs as a result of the struggle for control of areas to fishing (fishing ground), that may occur between classes of fishermen, as well as inter-class fishermen. It can also happen between fishermen and non-fishermen of other parties, such as between fishermen and other businesses, such as aquaculture, tourism, mining, the Charles (1993)[11] termed the allocation of external conflict.

Fourth, the primordial conflict, a conflict that occurs as a result of differences in identity, like ethnic, regional origin, and so on. Anatomy of conflict above illustrates how complex the conflict fishermen. The fourth type occurs both before and after the regional autonomy.

#### **b. Multiparty Collaboration**

In some cases the conflict resolution efforts utilization of fishery resources mostly settled in court, but through negotiation and mediation between parties in conflict with the local government mediators. Therefore, the role of local authorities and local institutions in the social and political context can affect the conflict solution process and fishermen in coastal areas (Daris, 2004)[12].

To empower fishing communities amid multiparty conflict of interests in order to achieve maximum benefit, it would require collaboration strategy that allows communities empowered in earnest. Himmelman explains that the strategy of empowering collaborative consisting of: (1) organizing a community to support the cooperation objectives set people concerned, and (2) facilitate the process that brings together external parties to support the achievement of community goals intended (Tadjudin, 2000)[13]. Furthermore Salman (2010)[14], explains that in order to realize the collaborative community empowerment and sustainable, then the relationships between the major parties in particular communities, governments and employers must be in a position equal or balanced.

#### **c. Sustainable Fisheries Management**

If it is associated with the concept of sustainable fisheries, the Satria (2009)[15] mentions three important dimensions that are empirically experience the tug reaches equilibrium processes, namely: the dimensions of the ecological, social, and economic. Sustainability and balance the three dimensions of sustainable fisheries is an ideal type. According to Charles (1993)[11], views the development of sustainable fisheries must contain aspects :

1) Ecological sustainability. In this view sustaining stock / biomass that do not pass the carrying capacity, and to improve the capacity and quality of ecosystems become major concerns.

2) Socio-economic sustainability. This concept implies that fisheries development should pay attention to the sustainability of the welfare of the fishery on an individual level. In other words, maintain or reach a level higher people's welfare is a concern in terms of sustainability.

3) Community sustainability, implies that the sustainability of the welfare of the community or society should be a concern to build a sustainable fishery.

4) Institutional sustainability (institutional sustainability). Within this framework, the institutional sustainability concerns the financial and administrative aspects of maintaining a healthy is a prerequisite of the three sustainability

#### **IV. CONCLUSION**

Sustainable crab fishery management is basically a management concept that synergize three aspects of development, ie environmental, social, and economic. In the implementation should be done in an integrated and intertwined. It requires the participation of all stakeholders involved in the utilization of crab, directly or indirectly. To build synergy or collaboration among all stakeholders is needed overall picture of the role and interests of each stakeholder. Stakeholder itself consists of three main groups namely fishing communities, businesses / enterprises and government.

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