

Internalization Of Conservation Values In Sustainable Fisheries Through Law Number 6 Of 2013

(On Villages About Crab Fishing Management In Betahwalang Village, Demak Regency)

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Abstract— The study aims to describe the conservation values internalized in the Law Number 6 of 2013 on Villages about Management of Crab Fishing in Betahwalang Village, the public awareness in implementing the conservation values, and the impact of the law toward conservation in Betahwalang Village. The research is evaluative and designed using the CIPP model (Context, Input, Process, and Product). Conservation values internalized in the village law include the regulation about management areas, protection areas, prohibitions, sanctions, duties and responsibilities. The internalization of conservation values can be seen from the use of friendly fishing gear called "bubu". The impact of the village law toward the conservation in Betahwalang Village is the sustainable fisheries as a changing process in which exploitation, technological development orientation and institutional changes are the harmonious processes that guarantee the fisheries potential resources at present to the future.

Keywords— *conservation values; fisherman; law on villages; sustainable fisheries*

I. INTRODUCTION

Indonesia is a maritime, nautical archipelago with the population of 140 million people (60%) living in coastal areas and 80% of which depends on the fishery resources [1]. The main occupation of coastal communities is fishermen. Fishermen is a group of people whose lives depends on marine products, either by fishing or cultivation. Fishermen live on the beach, a neighborhood near the location of their activities [2]. Based on the definition, people whose occupation is making boats, distribute fishes, fish traders, even fishermen's wives and children are not included as fishermen [3]. Some sources stated that fishermen are considered as poor people [2], [3]. Further, Prianto defines coastal communities as people who live in cities or coastal that have socio-economic characteristics that are closely related to the economic resources of the sea area [4]. Coastal communities are dominated by

fishermen which generally live in poverty. They have no livelihood options, have a low level of education, do not know and not aware of the sustainability of natural resources and the environment [5].

The Central Statistics Agency in September 2017 released a data that the poor fishermen contribute 20% of the total poor population in Indonesia or around 5.2 million people. The World Bank determines the fishermen income in Indonesia is below the poverty rates of Rp 520,000 per month [6]. The condition is in line with the research conducted by Hajar [7] in Bonang District, Demak Regency, Central Java Province, which revealed that there are four coastal villages that have quite a lot of poor families, there are Purworejo Village, Margolinduk Village, Morodemak Village and Betahwalang Village. Betahwalang is unique compared to other fishermen villages because it is the only village in Indonesia that had had Regulation Number 6 of 2013 concerning Crab Fishing Management before the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia issued regulation Number 1 / Permen-Kp / 2015 about Lobster (*Panulirus Spp.*), Crab (*Scylla Spp.*), and Rajungan (*Portunus Pelagicus Spp.*) fisheries. The village law was issued as an effort to prevent uncontrolled and continuous fishing activities that caused over fishing and decreased crab availability in Betahwalang [8]. The coastal area of Demak Regency is a potential area of fisheries which is promising and tends to encourage fishermen to use natural resources excessively.

Village Regulation Number 6 of 2013 about Crab Fishing Management in Betahwalang covers 5 (five) scope [9]. First, the management area. The management area refers to all coastal and marine areas in the Betahwalang village administration area. Second, the protected area. It covers the coast of Betahwalang. Third is the prohibition. The prohibition includes all fishing

activities using toxic materials, stun, anesthetic, and arad nets. Fourth, sanctions. Sanctions as stated on the Regulation is in the form of confiscation, fines and criminal penalties. Fifth, duties and responsibilities. Parties who have duties and responsibilities in Betahwalang fisheries are the Betahwalang Village officers, the Lestari Rajungan Fisheries Management Institute (LP2RL), and the community (fishermen and crab traders).

Nature conservation, especially crab fisheries has been carried out by Betahwalang fishermen by using eco-friendly crab fishing gear called "bubu". Conservation is defined as the utilization and management of natural resources including animals, water, air, minerals, renewable and non-renewable natural resources. Conservation issue is increasingly being public concern due to the increasing environmental problems and damages. Article 1 paragraph (2) of Law Number 5 of 1990 concerning Biological Natural Resources Conservation and Ecosystems states that the conservation of natural resources is the management of natural resources wisely to ensure the continuity while maintaining and improving the diversity, quality and its value.

According to the United Nations Environment Program (UNEP), the term conservation includes the concept of sustainability use of resources. Thus, the environment would provide the best benefits, sustainable for now and the future generations [10]. Sustainable fisheries is a process of change, in which exploitation, technological development orientation and institutional change is a harmonious processes and guarantees the present and future potentiality to meet human needs and aspirations. Conservation is the utilization and management of natural resources including wildlife, water, air, minerals, all renewable and non-renewable natural resources [10]. The study aims to describe the conservation values internalized in the Village Regulation Number 6 of 2013 about the management of Betahwalang Village Crab Fishing, public awareness in implementing the conservation values, and the impact of it on natural conservation in Betahwalang Village, Demak Regency.

II. RESEARCH METHOD

The research is evaluative and designed using the CIPP model (Context, Input, Process, and Product) [11]. Context analysis used to clarify the implementation of conservation values on the village regulations, such as strategies or models developed in preserving the natural resources and its environment, especially for crab commodities. Input analysis emphasized on the person who obey the Village Regulation Number 6 of 2013 those are the village administrators, the Lembaga Pengelolaan Perikanan Rajungan Lestari (LP2RL), and Betahwalang people (fishermen and crab traders). The analysis process emphasize, is on the implementation of fishing regulations. The product analysis give emphasize on the

internalization model of conservation values in the regulations.

The population in this research is Betahwalang Village Administrator, LP2RL, and the community (fishermen and crab traders). This research used purposive sampling. The respondent was 20 people. There are six variables in this study, they are: 1) internalization of conservation values model, 2) Village Regulations number 6 of 2013, 3) Supporting atmosphere of village regulations which are: (a) supporting facilities (fishing gear, rules enforcement, sanctions, and other supporting facilities), (b) facilities availability (information boards installation, the management of crab fisheries in Betahwalang Village), (c) the community's commitment and effort to protect and manage fisheries resources continuously, 4) Village regulation of other things will be solved in community meetings, 5) Implementation of conservation values in village regulations, and 6) Implementation of conservation values in daily activities. The research instruments that used are questionnaires, observation guides, interview guides, and documentation. The data source was documents, people's opinion, and observations. The data were obtained from the field using non-test and test techniques. The technique that are used is questionnaires, observations, documents, and interviews. The data validity was achieved using a multi-method strategy, as stated by Sukmadinata [12]. The analysis used qualitative approach using the technique of data collection, data reduction, and taking conclusion.

III. RESULTS AND DISCUSSIONS

Betahwalah Village fishermen have a schedule to go fishing. Those are fishermen who go fishing at 05.00 Western Indonesian Time (WIT) and go home at 16.00 WIT and fishermen who go fishing at 14.00 WIT and go home at 03.00 WIT. Up to now, there has never been a dispute regarding the different fishing time due to an agreement between fishermen facilitated by the village administrator. Local wisdom in preserving Betahwalang fishing area as a crab protection zone is indicated by the use of special fishing gear for crabs that is called bubu. Bubu which is 8 to 10 cm in diameter is made from a very strong plastic material which can accommodate 4 (four) to 5 (five) crabs at once. Each boat carries 500 bubu so in one time of fishing, the fishermen can get one ton of crab.

Another unique thing that can be found in Betahwalang fishermen is an unwritten agreement between traders or collectors with the fishermen. Each trader has 20 (twenty) fishermen members. The trader obligation is to provide diesel fuel, cigarettes, snacks and drinks for fishermen. Meanwhile, fishermen obligation is to give the fishing results to traders. There were 12 (twelve) traders or collectors in Betahwalang who started to pick up the crabs in a called Brak or angkruk at 15.00 WIB. The brak or angkruk is located in the middle of the river mouth, where the transaction takes place.

Harvesting takes place around February, March and May, where catches can reach 2 (two) tons per day.

The obstacles of the Village Regulation Number 6 of 2013 of Betahwalang Village is related to the crab protection zone supervision. The Betahwalang Village area is surrounded by several fishing villages whose fishermen often enter the protection zone and catch crabs using arad nets which endanger the crab habitat. This condition is in contrast to the concept of conservation as an effort to a sustainable resource. The ideal environment can provide the greatest benefits, sustainable for the current generation and to maintain its potential to meet the needs of future generations.

The establishment of Betahwalang Water area as a crab protection zone was initiated by the Rajungan Lestari Fisheries Management Institute (LP2RL) which was established in 2013. Based on the information from the Secretary of Betahwalang Village, Mr. Mahmudi, the institution was initially a place for the crab research of Diponegoro University fisheries lecturers which was later developed into the crab management institution and make the village a crab conservation zone. Through the concept of sustainable use of resources, the coastal areas of Demak Regency have the very promising potency of fisheries and encourage people not to use resources excessively (over-exploitation). Betahwalang fishermen are aware that uncontrolled and continuous fishing activities would cause over-fishing and result in the decreased crabs availability. Finally, the village regulation was able to embody nature conservation in Betahwalang Village as the realization of sustainable fisheries business.

IV. CONCLUSION

Conservation values, as stated in the Village Regulation Number 6 of 2013 concerning Management of Betahwalang Village Crab Fishing have been carried out by the village community using an environment-friendly "Bubu" fishing gear and the obedience to catch crabs using the nets that are only 8 to 10 cm in diameter. The Betahwalang fishermen hold a conservation concept as an effort to use resources in sustainable manner for present and future generations, so that the crabs production remains sustainable and promising a decent life.

The impact of village regulations on nature conservation in Betahwalang Village is the realization of sustainable fisheries as a process of change, in which exploitation, technological development orientation and institutional change are harmonious processes that guarantee the fisheries potency resources in the present and to the future.

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