

Empowering Fishermen through Local Wisdom and Sustainable Development: a Policy Research

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Abstract

The current study was to observe to what extent efforts are taken by the local government of Demak Regency, Central Java Indonesia to empower the fishermen based on local wisdom, as well as what model is right with the sustainable development. Technically, the government can take benefit from this study to issue a policy of 'empowering and protecting fisherman with sustainable development model. The regency has bio and non-bio potential resources. However, due to the lack of visionary attention to the resources and the absence of the comprehensive maritime planning, the ecology and the socio-economy of the area are facing serious problems, such as unhealthy competition in fishing in its multiple manifestations contributing to the poor welfare of the fishermen along the coastline. In-depth interviews were held among 20 fishermen to find out their wishes for improvement of the welfare. It was concluded that policies of pro-fishermen have to be developed on the basis of local wisdom and sustainable development and recommendations were offered accordingly.

Keywords: empowering fishermen, local wisdom, sustainable development

1. Introduction

1.1 Background

A comprehensive management of natural resources contributes significantly in helping the ecosystem for appropriate survival of human and nature alike. Furthermore, invention of new technology to open up changes for possible jobs or employment for the people needs to be seriously paid attention to, in order to maintain the level of welfare and prosperity. Other countries have managed to save labor by making use of the advanced technology. Unfortunate, Indonesia, as a developing country, has lack of capital and chance to innovate a new technology for human adjustment to modern life to internationally compete with other countries. It is widely known that the growth and progress of technology will greatly influences the growth of society, contributing the the nature of urbanization, agriculture, economy and socio-culture which cannot be separated from the growth and development of the mankind.

One factor leading to the decline of the fishermen's welfare is actually seasonal in nature. In other words it really depends on the climatic periods which sometimes cause to lower the number of fish to be caught. Consequently, the business on fishery processing is in trouble. This even worsens when the fishermen's only way of living is on fishery business in the sense that they do not have other jobs

Article 28 b of Paragraph (1) of UUD 1945 (Indonesian Constitution) on Human Rights states that " Everyone has the right to live and sustain his life and his livelihood." While in Article 18 of the UUD 1945 On Local Government states that "The Provincial Government, the Regional District has to take care of their own affairs in accordance with the principle of autonomy." From what is mandated by the Constitution, it is clear that the district government of Demak has the responsibility for achievement of its social welfare, particularly the community of fishermen.

The current study in support of the local government of Demak, focuses on empowering fishermen through local wisdom and sustainable development in support of improvement of their welfare and prosperity. The trend issues among them include (1) how fishermen can survive in the modern life flavored with foreign culture; (2) What elements of the foreign culture should be accommodated and integrated into the local culture (wisdom), and (3) How the local government can direct the maintenance and development of the local wisdom

collectively attached and obtained from community itself, makes the wisdom become a potential energy resource to live together peacefully, dynamically in a civil society.

1.2 Theoretical Framework

Local wisdom, which is in anthropology also known as the local genius, is a term first introduced by Quaritch Wales. It is argued that local genius is also cultural identity / national personality culture that led the nation to be able to absorb and filter foreign culture reflected to character and strength of its own (Ayatrohaedi, 1986: 18-19). Moendardjito (cited in Ayatrohaedi, 1986: 40-41), adds that the regional cultural is considered to be potential as a local genius as its ability has proven to survive until now. The main characteristics of the local wisdom are: it able to withstand foreign cultures; able to accommodate the foreign cultures; able to integrate the foreign culture into the original culture; able to control and direct to the culture development.

Local wisdom, as argued in and Ataupah (2004), is historical but positive in which the values of the local wisdom are transferred orally to the next generations to guarantee the dynamic atmosphere, which is , situationally important and should therefore determine the ecological system (ecosystem). The local wisdom itself originated from the noble of culture with respect to how the society should be wisely organized. In other words, local wisdom is constructed as the local culture of excellence associated with the geographical conditions in the broad sense. This is in accordance with Article 1 point (36) of Law No.1 of 2014 which mentions that local wisdom is a valid noble values of the public life, the long evolution process

Substantially, the local wisdom is value prevailing in a society that is believed to be true and made reference to behave everyday by the local community. It is an entity that is crucial for human dignity. In a social system, it makes sense, practicable, and can be taught and passed on from one generation to another. Besides, by the local wisdom is human behavior formed and guided.

Secondly, legal protection is a principle of the recognition and protection of human dignity based on Pancasila, which is based and derived from the concept of the recognition and protection of human rights which directed the laying of restrictions and obligations of both citizens and government. The substance of the law of nature has placed a universal principle which could be called human rights. Fitzgerald, from theory of Salmond legal protection, says that the law aims to integrate and coordinate the various interests in a traffic interest, can only be done by limiting the various interests on the other. It was emphasized that the aegis of human rights harmed by others and that protection is provided to the public in order to enjoy all the rights granted by law. It is also argued that law can be used to realize the protection of nature is not merely adaptive and flexible, but also predictive and anticipatory. On the contrary, more emphases on government's preventive and repressive actions can be used in the sense that 'preventive' here, aims to prevent disputes, which direct the actions of the government to be cautious in decision-making; while being 'repressive' aims to resolve disputes, including handling in the judiciary.

Furthermore, theory of Justice is much discussed by John Rawls (1993) in his book "Political Liberalism". Constitutional relevance of John Rawls's theory of justice is that the principles of justice are presented relevant for the countries of the developing world, such as Indonesia. Before the publication of Rawls' work on "social justice", the Indonesian people have based their national life on the basis of social justice. This is reflected in mentioning twice the term of "social justice" which are mentioned in the fourth paragraph of the Opening Paragraphs of the Indonesian Constitution (UUD 1945). Thus, social justice has been laid into the foundation of one of the goals and the state (*staatsidee*) as well as the philosophical basis of state (*filosofische grondslag*) as set forth in five precepts of *Pancasila*. Freedoms of citizens (constitutional rights and freedoms of citizens) contained in Chapter XA on Human Rights, among which Article 28E of the UUD1945 includes freedom of religion, freedom to express thoughts according to your heart (freedom of conscience), as well as freedom of association and expression (freedom of assembly and speech). As a principle of difference (difference principle), the Indonesian Constitution adopts the same principle in Article 28 H paragraph (2) of the *UUD* 1945 which reads, "Every person is entitled to the convenience and preferential treatment in the opportunities and benefits together to achieve equality and

Aristotle explains, between humans and justice is something that is worth doing; that is to say as a middle point between the two extremes; which are too much and too little. There are three known types of justice, namely (1) **Justice legal or moral justice**; Plato emphasizes justice and law is a common spiritual substance of the people who create and maintain unity. Justice embodied in the community where every member of the community perform their functions well according to ability; (2) **Distributive justice**; Aristotle argued that justice will be done when the same things are treated equally and appositely toward things are not the same. For example: division of labor within the company bonus that often hit flat without seeing workload carried out; (3) **Communicative Justice**; Justice is aimed at maintaining public order and the general welfare. For Aristotle's

sense of justice is a principle of coherence and order in society.

However, Justice by Plato projected in human beings that are said to be fair is the one who controls himself, and feelings are controlled by reason. Meanwhile, according to Socrates, justice is created when citizens already feel that the government has been carrying out their duties properly. So justice is the situation when everyone gets what they are entitled and each person gets an equal share of the wealth together according to their respective portions.

1.2 Research Questions

The current study was conducted under two research questions, namely (1) To what extent are efforts taken by the government for empowering the fishermen based on local wisdom? And (2) what model is suitable with the sustainable development of the local wisdom to support the government's efforts?

Such efforts to develop and empower the fishermen based on local wisdom sustainability are expected to improve welfare of the fishermen.

2. Method

This study employed a socio-legal approach to the essence of the legislation, with policy analysis to identify the legal aspect, as well as empowering analysis (includes empowering the human resource). It is a qualitative descriptive research (within the communities of coastal fishermen); with the sustainable development empowering model. This policy is expected to design the next conceptual framework which can establish amendments of UU No. 16 of 1964 and UU No. 32 of 2014 that corresponds to the sense of justice and local wisdom which based on philosophical, sociological, juridical and cultural grounding.

2.1 Subjects

Twenty people were purposefully selected to be the subjects of the research under the characteristics of being able to fluently communicate in Bahasa Indonesia with the level of education of minimal completion of High School. Most importantly, they were willing to complete the simple questionnaire in due time.

2.2 Methods of Data Collection and Analysis

Data were collected by means of questionnaires distributed to the fishermen. The questionnaires contain strategies for improvement of welfare and prosperity in the form of statements on which the subjects of the study basically stated their opinions whether to (1) strongly agree, (2) agree, (3) to stay neutral, (4) to disagree or (5) to strongly disagree. The collected data were analyzed on the basis of their preference. However, in reporting, the researcher used a different approach. She did not elaborate the fishermen's choices in percentage (%) to picture their profiles of preferences. Rather, as the current study was actually meant for support of policies by the local government of Demak, Central Java, Indonesia, the researcher directly outlined the policies (strategies) obtained from the government's documents.

3. Results and Discussion

3.1 Government's Commitment to Welfare Improvement

From the research findings, it has been identified that most fishermen are of small scopes. For these small and medium fishery businesses, the local government of Demak has some strategic policies, among others, provision of financial grants (capital), business facilities and infrastructure, mentoring/coaching, institutional strengthening efforts, as well as facilitating access to markets, technology, and human resource development. In addition to absorbing labor fishermen, fishery business is also able to create employment in other sectors, both in the upstream and downstream sectors, among others in the business of shipbuilding, fishing equipments as well as business processing and fishery products marketing.

With the high commitment and continuing efforts to improvement of the competence in each business line, the Directorate General of Fisheries Capture was determined to optimize the utilization of fishery resources in a sustainable manner, that is to develop the national fishing fleet and fishing ports, improve service operations and control licensing of fishing business, as well as develop fishery business and empower small-scale fishermen. The development policy of fisheries sub-sector is directed to support the four pillars of national development, namely, (1) Reducing poverty (pro-poor), (2) Providing greater employment opportunities (pro-job), (3) Promoting growth and equitable distribution of economic benefits (pro-growth), and (4) Promoting environmental sustainability (pro-environment) In addition, it is also directed to support national policies include the implementation of:

- 3 Master Plan for the Acceleration and Expansion of Indonesian Economic Development (MP3EI),

- 4 Master-plan for the Acceleration of Poverty Reduction Indonesia (MP3KI)
- 5 Acceleration of Development in Papua West Papua (P4B)
- 6 Storage of National Fish and various other policies.

Director General of Fisheries Capture Development (DGFCDD) has set its vision as "Fishing Forward and Sustainable for the Fishermen Welfare", which is interpreted into 2 (two) main missions, namely:

- 7 Optimizing the utilization of fish resources in a sustainable manner, and
- 8 Increasing efficiency to fishing which is objected to:
 - (a) Increase production and productivity with respect to fishing based management of sustained fish resources, and
 - (b) To improve the welfare of fishermen with the intended target of:
- 9 Increasing fish captures (intakes) in marine waters and open waters,
- 10 Increasing fishermen income, and
- 11 Increasing Exchange Value (*NTN*); the comparison between the prices received (It) with paid (Ib) index of Fishermen

To develop the sub-sector of fisheries, the Directorate General of Fisheries Capture carry one major program of "Development and Management of Fishing ". The program is then interpreted into six (6) main activities, namely:

- 12 Management of Fish Resources;
- 13 Establishment and Development of Fishing Vessels, Fishing equipment and Fishing Vessels Manning;
- 14 Construction, Development, and Management of Fishery Port;
- 15 Development of Fisheries and Empowerment of Small Fishermen;
- 16 Efficient, Orderly, and Sustainable Services of Fisheries Business
- 17 Management and Other Technical Task Implementation Support of fisheries DG.

The activity was fully implemented to support industrialization and supports the application of economic principles (blue economy) to improve productivity, efficiency, competitiveness, upstream downstream synergies and added value to fishing sustainability.

In order to get the fish resources sustainability, managed, it is made various efforts including through:

- 18 Activities that support recovery and enrichment of fish resources in the sea and public inland waters or, among others through the construction of fish houses and fisheries reserves,
- 19 Increasing participation in regional and international cooperation in the management of fishery resources,
- 20 Arranging, defining, and implementing fishery management plans,
- 21 Strengthening the statistical data of fisheries, and
- 22 Other SDI Management Activities, whether to be carried out at central or regional levels.

Related to the efforts to Fishing Vessels Management on site, DGFCDD has conducted a variety of activities, such as:

- 23 Promotion and development of fishing vessel design and feasibility,
- 24 Standardization and certification of fishing vessels, fishing gear and the crews of fishing boats,
- 25 Registration and marking of fishing vessels,
- 26 Construction of fishing vessels > 30 GT (gross tonnage) and GT 10-30,
- 27 Provision of fishing means, fishing tools, and the fish handling means on board, as well as the support Reconstruction, Development, and Management of Fishery Port is through:
 - 28 The development and construction of fishing ports, both in the Technical Implementation Unit (*UPT*) at center and regions
 - 29 Development of a fishing ports information center (*PIPP*),
 - 30 Harbor Services and Fish Catches Results Certification (*SHTI*) at the fishery port,

- 31 Improvement of services for the provision of fuel, ice, water in the fishing port,
- 32 Fostering the fishing ports management to provide excellent service to businesses
- 33 Initiate the development of environmentally sound fishing ports

Fishing Enterprises Development and Small Fishers Empowerment are undertaken through:

- 34 Increasing access to capital for fishing business,
- 35 Rural Fishing Business Development or *Pengembangan Usaha Mina Perdesaan (PUMP)*,
- 36 The development of diversified fishing activities
- 37 Institutional fishing development in support of fishing safety
- 38 Increasing protection against environmental misconduct
- 39 Development of business partnerships,
- 40 Development of the fishing card,
- 41 Development of Fisheries City or *Minapolitan*, and various other fishermen empowerment activities.

The fundamental principles of social transformation process effectiveness are with attention to: (1) Added Value, is a process of value adding to any economic activity of the fishing communities; (2) Competitiveness, is a process that provides for the competitiveness of commodities/products produced by the fisheries communities; (3) Productivity and Efficiency, is an effective raw material using production process but with an optimum output; and (4) People Centered, is a process to emphasize the community role as the main actors and the beneficiaries of fisheries industrialization process.

As for the empowerment model in relation to the sustainable development which can provide protection against fishermen, addressing poverty coherence is needed at all, the goal is to eliminate egoistic among stakeholder. The integration is as follows: **first**, the integration of responsibility and policies. Decision on fishermen addressing poverty must be taken through the process of coordination within government, as the poverty fishermen will not be able to be handled institutionally by the marine and fisheries sector, ranging from the center to the stricken. **Second**, integration of expertise and knowledge, to formulate policies, strategies and programs must be supported by a variety of disciplines and expertise. The plan is to really suit the demanding needs. **Third**, alignment problems and the troubleshooting is needed to determine the true root of the problem, so that policies are made to be comprehensive and not partial. **Fourth**, location; to facilitate mentoring, counseling and services (cross-cutting), so that the program can be done effectively and efficiently.

Failure addressing poverty over years, in addition to a lack of cohesion, also there have been various weaknesses in the planning. For that the planning process should be elements as follows:

- 42 Clear goal formulation, such as; expected outcomes, the responsible institutions, as well as object of activity.
- 43 Situation identifying, ie taking internal factors into account (the strengths and the weaknesses) and the external (the opportunities and the threats). It is to determine the actual condition of the object to be handled, which will facilitate the various strategies then.
- 44 Goals setting should be specific (the objects, activities, time limited and measurable), so that the target, the type of activities, and the time taking can be clearly determined.
- 45 Circumstances analyzing; the implementation in field should match the policies made. In case of unexpected problems, then it needs strategy and new measures to close the gap.
- 46 Assistance, monitoring and evaluation; the assistance should start from pre- up to post activity carried out. An evaluation is to check whether the activity was carried out in accordance with its intended purpose.

3.2 An Integrated-Sustainable Community-Based Coastal Management

An integrated-sustainable Coastal Management is a dynamic process that runs continuously in making decisions about the use, development and protection of the territory and coastal and marine resources. An important part in this integrated management is institutional design processes to achieve harmonization in a manner that is acceptable politically.

A Sustainable Coastal Management is that if the development activities are economically, ecologically and social-politically sustainable. Economically sustainable means that the activity should be able to produce

economic growth, maintain the capital, and use the resources and investments efficiently. Ecologically sustainable means that the activity should be able to maintain the ecosystem integrity, the carrying capacity of the environment, and conserve the natural resources, including biological diversity (biodiversity). Social-politically sustainable requires that a development activity should be able to equalize the results of development, social mobility, social cohesion, community participation, community empowerment (*dekratisasi*), social identity, institutional development (Wiyana, 2004)

Community-Based Coastal Management is defined as a system of natural resource management which local people is actively involved. In Indonesia, community-based resource management actually has been set out in Article 33 of the Constitution of the Republic of Indonesia in 1945 (*UDU NKRI 1945*) which states that the earth and the water and the natural resources therein shall be controlled by the State and used for the greater prosperity of the people. The provision is explicitly wants the implementation of the control of the State over natural resources, especially coastal resources and the seas are directed to the achievement of benefits for the greater prosperity of the people, and also to be able to bring about justice and equality while improving the lives of coastal communities and promote villages beach.

3.3 Local Authority in Marine

The total area of coastal Indonesia is two-thirds of the land area and 95.161 kilometers of coastline or the second longest in the world (Ahmad, 2011). During the New Era (*Orde Baru* or President Soeharto rezim), coastal and marine areas setting are mostly done by the Central Government. This can be seen in Act No. 24 of 1992 on Spatial Planning, Article 9 paragraph 2 where it is stated that the area of ocean and airspace are set centrally by law. But in the reform era or *orde reformasi* as the birth of Law No. 22 of 1999 on Regional Government which is then converted into Law No. 23 of 2014 amended again by Act No. 9 of 2015, Regency / City has the authority to regulate territorial waters in their area so far 4 miles from the beach.

By the issued of Law No. 27 of 2007 on the management of coastal areas and small islands, as an archipelagic country, the coastal region shared by all provinces in Indonesia. Based on data of the number of district / city in Indonesia in 2002, as many as 219 Regency / City (68%) of them have coastal areas. Regency / City in Indonesia each have the physical characteristics of coastal areas that differ from each other in the management of coastal areas. But by the end of 2004, the planning and management of coastal areas both at central and local level more sectoral.

3.4 Utilization and Management of Demak Potential Coast

Virtually, the coastal areas potential used directly by the people living in the region who are generally fishermen. The Marine resources utilization is ranging from fish, seaweed, coral reefs and so on to their daily need; which is limited to the needs of life.

A conservative and sustainable of natural resources utilization is affecting preservation of a coastal and environment. The degradation of coastal areas is indirectly caused by natural resource management in upstream which affects the estuaries. Reclamation policy which is not based on environmental impacts analysis also affects bad to the ecosystem. Business development licensing has been largely authorized centrally. Meanwhile, Various problems arise in the use and management of coastal areas can be summed up some of the following:

- 47 The use and management of areas are not regulated clearly which makes the the regions, in consequence, have difficulty in establishing a policy.
- 48 The use and management of coastal areas tend to be regional which causes policy overlapping.
- 49 Utilization and management of coastal areas do not consider to the concept of coastal as a whole ecosystem which is not restricted by regional government which then creates conflicts of interest between regions.
- 50 The regional autonomy has not been understood comprehensively by stakeholders and raised various interpreting among regions and sectors

3.5 Policy, Strategy and Coastal Area

Policies relating to the management of marine and coastal areas are described as follows:

- 51 Revitalization of functioning protected area, including protected areas located in the territory by land and sea / coastal areas, in order to maintain the quality of the environment while securing the coastal areas from the threat of natural disasters. One of the causes of the problems in marine and coastal areas is the loss of the function of protected areas that should be designated as protected areas, including

protected areas on land areas silting coastal waters, damage to sea-grass beds, and coral reef damage (coral bleaching).

- 52 Development of coastal communities based on potential economic and social conditions of the local culture to improve the welfare of society through the utilization of marine and coastal resources in an optimal and sustainable vision of local wisdom. Improvement of social welfare / coastal fishing is one of the keys to reducing the pressure on marine and coastal ecosystems of resource utilization uncontrolled.
- 53 Improvement of regional infrastructure network services to support economic development in marine and coastal areas. The availability of adequate regional infrastructure networks can support the utilization of marine and coastal resources optimally and support the functions of the coast as a node collection-distribution of economic activities.

3.6 An Urgent of Fishermen Protection Bill and Empowerment

Representatives of fishermen and women from districts/cities in Central Java, urged the House to draft and prioritize a Fishermen Protection and Empowerment Bill as a priority of the National Legislation Program 2014-2019.

3.7 Expectations of Local Fishermen and Women

Traditional fishers at Morodemak village in District of Bonang, are to get aid of the Global Positioning System (GPS), a fishfinder that can help to locate the fish. The handover is done directly by the Minister of Research and Technology who was once, Gusti Muhammad Hatta, accompanied by Vice Chairman of Commission VII, Daryatmo Mardiyanto, at the Fishery Port Morodemak Beach.)

On that occasion, Minister of Technology said that GPS was directly connected with the National Oceanic Atmospheric Administration (NOAA), the satellites that could monitor the position of the fish. In addition, fishermen could determine the type of fish which would be caught up to a depth of 400 meters, through the GPS and satellite. It is assumed that, despite being fully experienced, fishermen are used to come to a place, without knowing position of the fish. These tools would help fishermen to locate them.

Fishermen, later, will get information from the National Institute of Aeronautics and Space (LAPAN) every day, regarding the position of the fish. During this time the fishermen still constrained by traditional equipment and based on instinct of any fine days which is not maximum; which make them unable to achieve a welfare. Even for small fishermen, the catching is not enough to cover their needs. The use of GPS devices is expected to increase catches and welfare of fishermen. The devices are distributed to only 26 units because it is still in research. During the coming week, fishermen will receive training and technical guidance on the use of the GPS device. Meanwhile, Mardiyanto hoped "GPS tools can meet the expectations of fishermen related types of fish they want to catch."

Technology of the GPS fish finder can select types of fish as desired. In his speech, the Regent of Demak, positively appreciated the aid. Fish captures in Demak coastal reached 923 721 tons, while salt production reached 62 340 tons. That was to appreciate the fisheries and salts potential and even to prioritize them.

On the other hand, mangrove forests grow in brackish water, and is influenced by the tide. This forest grown specifically in places where there is silting and accumulation of organic matter, both in bays sheltered from the onslaught of the waves, as well as around the mouth of the river where the water slows down and precipitate sludge had brought from upstream.

Within the scope of Demak coastal districts, such as North Wedung includes Babalan, Kedungmutih, Kedungkarang, Tedunan and Kendalasesem, the fishers, expect to have a diesel refueling station. During this time the fishermen buy diesel fuel to retailers who take diesel from Jepara which is far and expensive because of the transportation additional costs from Jepara.

Fishermen of Rajungan in Betahwalang village, Ali Su'udi (50), said that, despite the relatively high water waves, but it did not deter hundreds of fishermen in his village to look for crabs. Collectors of Rajungan in Betahwalang village, Ahmad Mufid (41) , said the small crabs collected will be deposited to the fishing industry in Pati and Semarang for canned and then be exported to the United States. Currently there are dozens of small crab collectors in the village.

Residents of Morodemak known as 'Wong Moro' administratively located in three villages namely Margolinduk, Purworejo and Morodemak. Wong Moro is fishing villagers who is still struggling for a welfare in global era. In 2004, fishing port of Morodemak able to achieve a production of 3.312 tons, or approximately 10 tons per day

using 933 units of fishing gear; including small outboard motor boats. That is, Wong Moro contribute greatly to the fulfillment of protein which is an important part in intellectualize the nation.

However, until now, the fate of Wong Moro are often swayed by the lack of government attention to be more prosperous. It's Seen from the lack of capital assistance, climate insurance, and the difficulty in accessing subsidized fuel for small-scale fishermen. Therefore, KIARA along with LBH Semarang PPNI, and Group Jaka Kencana, do Coastal Fishermen of Morodemak discussion to 'Redefining the Role of Fishermen'.

Poorly, thousands of fishermen in Demak are not affected by the policy of the Ministry of Maritime Affairs and Fisheries (MMAF) in banning the use of either *cantrang* or *arad*, (traditional fishing vessels) rigger trawl or seine attraction when looking for fish in the sea. Whereas, the fishermen aware the environmentally unfriendly and damaging of the fishing gear toward marine ecosystems.

Coastal Monitoring Group Chairman of Bonang, Khoeron Imron said, since 2014, the use of *cantrang* (traditional fishing vessels) had been reduced drastically. Those whose *cantrang* usage period runs out, did not extend it. Meanwhile, those whose were still valid, did not dare to use it freely. If anyone used, he looked for fish in the sea, not to collide with small fishers. Moreover, now there was a strict rule to ban it; consequently, fishermen feared to be identified by officer. For those, "we couldn't agree more" Said Imron. It would damage the marine life as it enable all kinds of fish from bottom of the sea and the beach to come up, even spawning fish, caught in the trawl net. The system of *cantrang* was by absorbing fish thousand meters away. So that it could eliminate and destroy fish and other marine life.

In Demak, the use of that trawl net has been disturbing, as it unlimits regions to catch. Demak has *Pelabuhan Perikanan Pantai (PPP)* or a Beach Fishing Port located in Morodemak. The PPP is located in Kongsu, Purworejo, Bonang, Demak district with an area of 3.9 ha, with 34.1 km long coastline. Bodies of Morodemak is a marine estuary of the River Tuntang Lama.

Now, the government has provided fishery facilities, among others consisting of

- 54 Land of 3900 m²
- 55 656m² , 45 m² Auction office buildings
- 56 1 Unit of Electrical installation
- 57 The water tower,
- 58 1 Unit of Mechanical and electrical
- 59 200 m² of Drying floor of fishing gear
- 60 Newsstand (4x5m) 12 units, (3x4m) 20 units, (2x2) 7 units, SPDN, CBIP, Cold Storage 1 unit
- 61 Training center of *Nelayan Sekaya* Maritime .
- 62 Supporting Facilities
- 63 Fish Processing Centers
- 64 Support Facilities
- 65 Fish Processing Centers
- 66 Catfish Village of Wonosari
- 67 Salt Enterprises Development
- 68 Fishermen empowerment
- 69 Capital Access Strengthening
- 70 Protection of fishermen
- 71 Fishermen's Welfare
- 72 Facilities and Infrastructure

3.8 Mangrove Planting

Demak coastal degradation is quite alarming, one of which is a pretty serious damage due to abrasion of sea water. One effort to inhibit it is to plant mangrove in the coastal areas. In addition, the lush mangrove can be developed as a tourist destination.

3.9 The Development of Fisheries Sub-Sector

Below (Table 1) is Small and Middle Business' Development among the fishermen's entrepreneurial stands

Table 1. Small and Middle Business' Development in P2HP center

No.	UKM	2010	2011	2012	2013	2014	2015
1.	UKM/UPI steamed fish di Desa Wonosari	95	97	87	71	95	130
2.	UKM in Steaming Center	20	28	48	64	76	76

Table 1 above outlines that there have been significant increase of the business. Despite two points of decreases in 2012 (87) and 2013 (71), the business of steamed fish increased significantly of 130 in 2015. Meanwhile the steamer centers increased considerably from 2010 to 2015.

4. Conclusion and Recommendations

Policies are made to the development in the empowerment of fishermen based on local wisdom through expanding services at midwife Marine which is offset by the availability of employment; development of human resources competency standards of Marine; improving and strengthening the role of science and technology, research and development of information systems Marine; Marine and of nutrition; and e) an increase in labor protection. Meanwhile, empowerment model of fishing communities in relation to sustainable development is meant to provide protection to fishermen; to reinvigorate e Fishermen Cooperatives, to facilitate the development of social security insurance for fishermen with the purpose of providing assurance of safety protection and social security for fishermen within the scope of his work which has a fairly high risk, to provide health insurance for the fishermen, including fishermen's welfare; and to develop the infrastructure to facilitate the work of fishermen.

It is therefore recommended that (1) supporting infrastructures for facilitating the fishermen to go to sea based on consideration of Article 28 and Paragraph 1 of the 1945 Constitution and Article 18 of Paragraph 2 of the 1945 Constitution should be proposed to the Central Government and / or regional governments; and (2) the issuance of the Law on the Protection of the Fisherman and / or at least created the Regional Regulation with reference to Article 18 paragraph (2) NRI Constitution of 1945, Law No. 17 Year 2014 About the MPR, DPR, DPD, DPRD, Article 166 in order to provide protection of fishermen based on local wisdom with the concept of sustainable development in Demak should be proposed.

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