
THE DEVELOPMENT OF NILA MINAPOLITAN AREA THROUGH THE UTILIZATION OF FISHERY RESOURCES AND PUBLIC PARTICIPATION IN KLATEN DISTRICT

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Abstract: The development of Minapolitan area through local potential is an attempt to support the protection and development of local social culture along with local economy. Klaten district that has potential in fishery resources becomes the location of research using Natural Resources Analysis, Policy Analysis, and Interactive Analysis methods. The results of the study revealed that the references used in developing Minapolitan area are 1) The Policy and Strategy of Cultivation Area Development 2) The Policy and Strategy of Human Resources Development 3) The Policy and Strategy of Water Resources Infrastructure Network System Development. Thus, the most fundamental policies pursued in the development of the fishery sector is based on the utilization and control of fish production in Minapolitan area, so as to create integration between demand and production of fish.

Introduction:

Research Background: The potential of natural resources in Indonesia are abundant to be properly, sensibly and sustainably utilized in order to improve the welfare of the society. Among many natural resources that exist in Indonesia, one of them is fisheries. The government has sought to develop the potential of fishery resources through various policies, for example the Minapolitan Conception by which fishery is also being developed. Government's policy to develop fishery is contained in the Regulation of the Minister of Marine Affairs and Fisheries of the Republic of Indonesia PER.12/MEN/2010 on Minapolitan. According to it, Minapolitan is an area-based conception of fishery economic development based on integrated, efficiency, quality and acceleration principles. In Minapolitan development, the Ministry of Marine Affairs and Fisheries of Indonesia has listed potential and prospective regions to be made into Minapolitan Area. On the Regulation of the Minister of Marine Affairs and Fisheries of Indonesia No. PER.12/MEN/2010 on Minapolitan, it also states that the definition of Minapolitan area is a part of certain region which has primary function in economy consisting of center of production, manufacture, marketing of fishery commodity, services, and/or other supporting activities. Thus, basically, Minapolitan Area is an area with the major activity as economic center which utilizes, manages, and cultivates marine and fishery resources; as well as having functional connection with its residential system which is developed to encourage local economic growth and foster regional competitiveness (Pujiasmanto, 2014 and Yudana, 2013).

The development of Nile tilapia cultivation area, in this case, focuses on water resources development and community-empowerment-based area or zone management for seeding and rearing by giving

optimal role to local people in order to improve their economy and welfare. Furthermore, fishery development is one of strategic policies to prevent poverty in order to improve the prosperity of the people. However, whether it is developed through society-based populist approach or developmental approach, fishery resources development has to uphold the principle of environmental functioning preservation, so that the benefits of the development area can be enjoyed both by this generation and future generations (our children and grandchildren). Thus, conservation principle for the environmental functioning preservation must also be held and managed properly; therefore the natural environment can be preserved and is able to support food sustainability and security.

The basic idea in developing fishery resources is to strengthen the synergy between economic improvements of the society and support environmental preservation, as well as the attempt to invent fishery resources management methods along with the instruments that will be able to guarantee the preservation of environmental function for a sustainable regional development. Society empowerment through fishery resources development may include the integration of related resources such as water resources, fish varieties, agriculture products, and human resources for supportive contributions.

Furthermore, given that the development of fishery resources utilizes local potential, then this concept is very supportive towards the protection and development of local social culture and local economy, including micro, small, and medium enterprises (SMEs). Klaten district has the potential to meet the qualifications as mentioned above. Therefore, developing Nile tilapia minapolitan area through a proper management of natural resources utilization is needed, especially on the basis of society

empowerment in Klaten.

Literature Reviews:

Fishery Resources Management: As an archipelago, Indonesia has large potential of fish resources and high variations of biological diversity, where Indonesian waters has 27,2% of total flora and fauna species found in the world comprised of 12,0% mammals, 23,8% amphibians, 31,8% reptiles, 44,7% fishes, 40,0% molluscs, and 8,6% seaweeds (Mallawa, 2006).

Fishery resources is an aspect which is very prominent in fishery sector and the inability to manage it may result in the decreasing income of fishery sector from available resources. Given the fish resources management ranges to a wide scope and our experiences in management field is still limited, a convention in interpreting fishery resources management as one meaning is needed. In administrative science, *management* has central elements consisting of POAC namely *planning, organizing, actuating, and controlling*. Fishery management is an integrated process, ranging from information gathering, analysis, planning, consultation, decision-making, source allocation, and implementation in an attempt to ensure the continuity of productivity and management purposes achievement. In the management of fish resources, it is necessary to make several limitations that we need to pay attention to, including: (1) the scope of management area (2) who the managers are, and (3) how the management is (Mallawa, 2006).

In Act No. 31 of 2004 on Fisheries, it is stated that fishery management is all attempts including integrated process in information gathering, analysis, planning, consultation, decision-making, allocation of fish resources, and implementation as well as enforcement of law and legislation in fisheries which is conducted by the government or other authorities aimed at achieving the continuity of waters biological resources productivity and objectives that have been agreed upon. The objectives of fish resources management are stated as follows.

- (1) Improving the living standards of small scale fishermen and fish farmers;
- (2) Increasing income and foreign exchange for the country;
- (3) Encouraging employment expansion and opportunity;
- (4) Increasing supply and consumption of fish as protein sources;
- (5) Optimizing fish resources management;
- (6) Increasing productivity, quality, added value, and competitiveness;
- (7) Increasing the availability of raw material for fish

- processing industries;
- (8) Achieving utilizations of fish resources, fish cultivation areas, and fish resource environments optimally; and
- (9) Ensuring the preservation of fish resources, fish cultivation areas and spatial arrangement.

Sustainable and community-based fish resources management is a management leading to how fish resources that are currently available will be able to meet current needs and the needs of future generations, of which sustainability aspect has to include ecological, socio-economic, societal and institutional aspects. Sustainable management of fishery resources is suggested to meet the requirements that the utilization rate must not exceed the carrying capacity of the aquatic environment or recovering ability of fish resources, so that future generations' fish resources assets will have the same amount or more than that of today's generation. Bengen in Mallawa (2006) states that a management is considered sustainable if such activities is able to achieve three goals of sustainable development, which are ecologically, socially, and economically. Ecologically sustainable means that management of fish resources must be able to maintain the integrity of the ecosystem preserve carrying capacity of the environment, and conservation of fish resources including its biodiversity so the utilization of fish resources can be sustainable. Social sustainability requires that fish resources management activity should be able to equalize outcomes, social mobility, social cohesion, society participation, society empowerment, social identity, and institutional development. Economically sustainable means fish resources management activity must be able to efficiently result in economic growth, capital maintenance, and fish resources utilization as well as investment (Mallawa, 2006).

Minapolitan Area: The development of fish cultivation area or Minapolitan is a program of Agropolitan fields which functionally stepping upon fishery sector activities based on prime commodity development basis, whether in aquaculture using salt water, brackish water, or fresh water; including processed products and aquatic environmental services in a cluster of area consisting of some villages or sub-districts, as an attempt to create the parallel between city and village. In that equal condition, it is expected that there will be access improvement of rural societies through the development of service centers. Thus, infrastructure development in rural areas becomes an important key as the beginning of Minapolitan development (Bakrie Zakaria, 2010). The concept of fish cultivation area or Minapolitan was popularized in 2009 by the Minister of Marine

Affairs and Fisheries, Fadel Muhammad. Up until 2011, tens of areas have been tested to try Minapolitan concept out into practice. Minapolitan consists of the words *mina* and *politan* (polis). *Mina* means fish and *politan* means city. So Minapolitan can be interpreted as a fishery city or a city in fishery area or fishery in urban area. Fishery city may be city, small town, or sub-district which serves as the center of economic growth that encourages economic growth in its surrounding areas by maximizing fishery potential of the fishery. More than that, Minapolitan itself is intended to be a fishing town that grows and develops due to the systems and mina-businesses which are carried out properly and also able to serve, push, pull, and heave fisheries development activities in the surrounding areas (Fitrawan Umar, 2011).

In the context of national development, Minapolitan area development is a form of elaboration and implementation of Act No. 26 of 2007 on Spatial Planning, particularly in the fight against poverty through rural areas development based on agribusiness development in a broad sense and coordinated in regional development system which is integrated and sustainable. Therefore, development should begin with a Minapolitan base line study to be used as the basis for preparing the Master Plan area and the types of commodity that will be developed through variety of requirements, both technical and social, so it can be used as an indicator in evaluating Minapolitan performance afterwards. Besides, in order to make Minapolitan program as a systemic movement, the followings are needed: political communication with legislature in the process of budget planning to obtain financial support for the implementation; improving comprehension of Minapolitan program for regional stakeholders; activities' development that is in accordance with the needs of the society; and cross-region synergy in a regional perspective (province). Furthermore, other variables which also become the key to successful Minapolitan development are: support from community leaders in the region, a solid working groups, and regional leaders who have strong commitment as a cross-cutting and cross-platform development hierarchy.

In the perspective of society empowerment, the approach pattern of Minapolitan program must be done through society empowerment in the form of "action movement" (not the project), as a reduction strategy of poverty which focuses more on the society involvement to be invited in a dialogue to discuss what their needs are, scale of priorities, and how to achieve them – "No empowerment without participation" – thus, the empowerment of the people as subjects (not objects) will come to pass, which is expected to be able to deliver success in the

sustainability of the program with medium and long term orientations (Bakrie Zakaria, 2010).

In addition, since the operation of Minapolitan program does not have specific budgeting in its sectional department, divided roles between capital and regional as well as the funding mechanism are needed. Thereby, at the national level, there need to be improved coordination between Ministries and relevant agencies such as Ministry of Home Affairs, Ministry of Agriculture, Ministry of Marine Affairs and Fisheries, Ministry of Forestry, Ministry of Public Works, Ministry of Trade, Ministry of Industry, Ministry of Manpower and Transmigration, Ministry of Cooperatives and SMEs, and Ministry for Development of Disadvantaged Regions, under the coordination of Minister of Home Affairs as the Chief of the State Agropolitan Working Group.

Today, Minapolitan program has been taken as an interest by regional governments as one of the main strategies in rural development, particularly the coastal areas which are facilitated by central government as a concept of fishery and rural area development, in order to: create balance between rural and urban development through the development of agribusiness service centers in a broad sense and residential or small towns, and (b) develop a whole subsystems of fishery development consisting of upper course subsystem, lower course subsystem, and supporting subsystems, so fishery sector can grow steadily, optimally and competitively. However, it needs to be understood that the main purpose of society empowerment is the change mindset and behavior, which, at the same time, become the core of the development success as a social investment. The challenge to its achievement is the process that requires strong consistency, dedication, and commitment to the national development goals (Bakrie Zakaria, 2010).

Public Participation: Public participation is a crucial factor that determines the success of the development, including the success of environmental management. A correct understanding of the concept of participation of society members as well as the government bureaucrats in involving communities, in the end, become an entry point in every development process. Basically, public participation is voluntary action of society to support the achievement of the success of the development programs. Bintoro Tjokroamijoyo (1988) highlights several matters regarding the relationship between development and participation; they are: (Tjokroamijoyo, 1988)

1. Public participation is active involvement of the people in the process of determining direction, strategy and policy by the government.
2. Public participation is involvement in bearing the

burden and responsibilities in the implementation of development which may be in a form of effort to mobilize funding resources in development, harmonious productive activities and also social supervision over the course of development.

3. Participation is involvement in harvesting the results and benefits of the development fairly by improving society involvement in various forms of productive activities and extending opportunities and assistance.

By looking at the close relationship between development and participation, then society participation in development has a very important meaning. Conyers (1954), in Suparjan and Heri Suparno (2003), cites three main reasons why the role of public participation is important. Those reasons are stated as follows: (Suparjan and Suparno, 2003)

1. First, society participation is an instrument to obtain information about local society's conditions, needs and attitudes of which development program and project will fail without it.
2. Second, society will rely more on the project and development program if they are engaged in its preparation and planning processes, since they will know more about the project's details and have sense of ownership and responsibility towards the projects.
3. Third, participation becomes urgent since there is an idea that it is a democracy right if community is involved in society development. In this context, people have the rights to give opinions in determining the kinds of development that will be implemented in their area (*man-centered development*).

On the one hand, public participation is, basically, a form of improvement in their bargaining position so that their bargaining power is balanced with the government and other parties (privates/capital owners). On the other hand, public participation is a power of control over the policies made by the government side so that the presence of society participation will materialize the synergy between local resources, government's political power, and capital resources from foreign investors. To optimize public participation, regulations from the government that provide protection and sides with local society are needed (Suparjan and Suparno, 2003).

Participatory approach is an attempt to overcome the weaknesses of centralized approach such as dependency on centered bureaucratic organizations which lack in responses toward the diversities in community, inadequate investment in the process of community development to solve problems, lack of attention in handling society diversities particularly

in understanding layered social structures, and not enough integration between technical and social components in development.

In terms of participation, society needs to be involved in every development process, which includes: (1) problems identification where society along with the planners or policy authorities identify issues in group discussions, brainstorming, opportunity identifications, potential identifications, and obstacle identifications; (2) planning process in which society is involved in the plan and strategy making based on the identification results; (3) implementation of development project; (4) evaluation, which means society is involved in assessing the results of the development that has been done, whether the development gives beneficial results (benefitting the society) or it makes society suffer damages by the process that has been done, instead; (5) mitigation, which means society groups may engage in measuring as well as reducing negative impacts of the development; and (6) monitoring, means a stage which is done so development process that is implemented can be sustained (Suparjan and Suparno, 2003).

Eugen C. Erickson (1974), in Suparjan and Heri Suparno (2003), states that, basically, participation consists of two parts, namely internal and external participation. Internal participation means that there is sense of belonging towards the community. Meanwhile, external participation is concerned with how an individual figure engaging themselves with the outside community. Keith R. Emrich (1979) in Suparjan and Heri Suparno (2003) mentions several guidelines in policy-making which contains development participations, namely: (Suparjan and Suparno, 2003)

- (1) Participation has to begin from the lowest level through both administrative-based community forums such as RT, RW, village discussion and institutional-based community forums such as prayer group, farmer group, crafting group, merchant group, etc.;
- (2) Participation has to happen in all levels of development process;
- (3) A support is not merely participation;
- (4) Participation must include real programs in production and distribution;
- (5) Participation must change the available organizations or groups' loyalty;
- (6) Participation improvement will contain challenges from certain parties.

The underlined matter in the concept of participation is that participation should not only be seen from the fiscal aspects, but also the non-fiscal aspects which help the continuity, security, and accessibility, so that there will be an awareness regarding the importance

of those things. Furthermore, our task is to think and take steps to persuade the society so that they want to see the participation and appreciate from various directions including the participation of creating an initiative and giving suggestion to the Local Development Planning Agency (Bappeda). In implementing participative approach, it needs the existence of a planner who has democratize attitude, open minded, belief in basic powers of community, and ability to encourage and support the public participant growth (Suparjan and Suparno, 2003).

The Previous Researches: Istijabatul Aliyah (2011) examines the development of Minapolitan area as tourist attraction and the center of local economic growth of Pacitan district. The research also discusses several sides regarding the management of fish resources to increase the economy of fisherman community. However, because the location is on coastal area, the research does not focus on the effort to find a certain method employed to manage the cultivated fishery resources (freshwater fish) to boost society's economy and build food sustainability and security.

Kiki Haetami (2007) conducts a research regarding the needs and diets of *Jambal Siam* fish from the level of giving fodder's protein energy and its effect of the growth and efficiency. Although the research concerns on fish resources, it does not emphasize the effort to discover the method to manage the fish resources in order to increase the society's economy and build food sustainability and security.

Achmar Mallawa (2006) regarding the strategic issues of fish and ocean research emphasizes the biological, physical, socio-economy, and cultural aspects. The research examines the previous researches related to the area development through the empowerment of fish resources potential and public participation. Therefore, there are many issues revealed in those various researches. However, among the issues, there is no specific concern towards the effort to find the method to manage the fish resources potential and public participation. Likewise, Bambang Pujiasmanto's research on the development of fishery resources management method to accelerate society's economy and support food sustainability and security (Pujiasmanto, 2013), has not produced the focus of study on the minapolitan area development through the utilization of fishery resources and public

participation. On the other hand, Galing Yudana's research produces the development of fish village area based on cluster system by zone division from upstream to downstream. However, it has not involved public participation yet.

Even though several related researches conducted, as mentioned above, do not discuss what will be done in this research, all those researches can give insights and become the reference to conduct a research relating to the area development through the utilization of fishery resources potential and public participation.

Research Methode: This research is located in Klaten by considering the potential and existing problems in the district of Klaten related to the Development of Minapolitan Area (Nile Tilapia Village) that has been assigned by the Regent of Klaten with the Regent Decree No. 523.3/124/2009 on 6 March 2009 and inaugurated by the Governor on 10 March 2009.

In conducting this research, the data are collected through observation, interview, and data checklist on related institutions, as well as direct observation on the field. Moreover, this research uses purposive sampling and snowball sampling technique. The samples used are the society and the government officials, especially the parties that are involved in developing the area through the utilization of fish resources potential and public participation. Snowball technique is applied to determine the informants by contacting the first key informant from the society and government officials which are selected and then seeking the next key informants based on the information of the first key informants until the data needed are fulfilled. By using this technique, it is expected that the researchers will get the appropriate key informants. Moreover, the data validity in this research is conducted by using respondent data source triangulation and technique of data collection triangulation.

The techniques of data analysis applied are 1) Natural Resources Analysis, 2) Policy Analysis, and 3) Interactive Analysis.

The Natural Resources Analysis is used to analyze the natural resources potential in Klaten in order to formulate area development strategy through fish resources utilization and public participation. The analysis of natural resources covers (Andalan Rereka Consultindo, 2012):

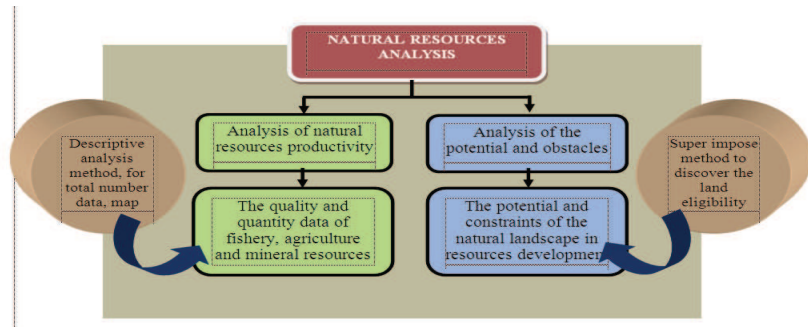


Diagram 1: Natural Resources Analysis

Meanwhile, the policy analysis is applied by using qualitative method. This analysis is used in order to get the result of policy formula and the proper strategy to developing minapolitan area based on the community in Klaten Regency. The examined matters in this policy analysis are (Andalan Rereka Consultindo, 2012):

- a. Analysis of the implementation of development corresponds with the arranged and targeted priorities by each sector by considering the potential and development concept reviewed from economic aggregate, development budgeting and the existing political policy.
- b. Budgeting development analysis is suitable with the priority scale and the existing development stage and fundraising which must be earned.
- c. Analysis of regional development policy is used to know the regional development policy which must be applied according to the existing priorities.

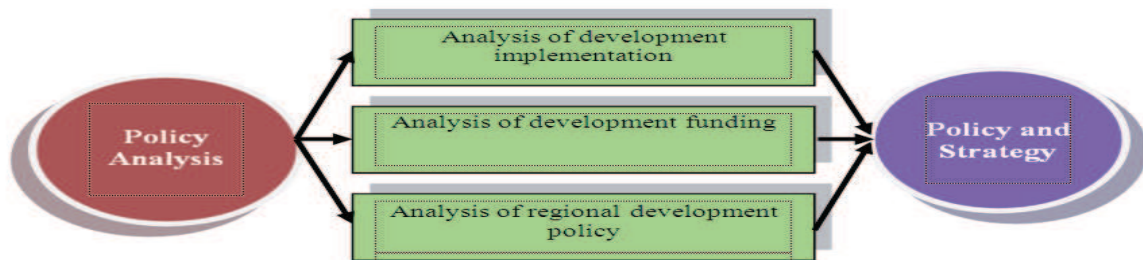


Diagram 2: Policy Analysis

In interactive analysis technique, the analysis is undertaken continually from the beginning of data collection until the verification process which occurs from the beginning of the research until the research

is finished (Miles & Huberman 1984). It covers (1) data collection, (2) data reduction, (3) data display, and (4) conclusion/verification.

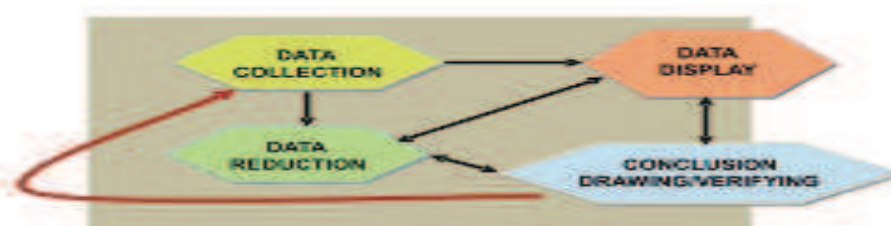


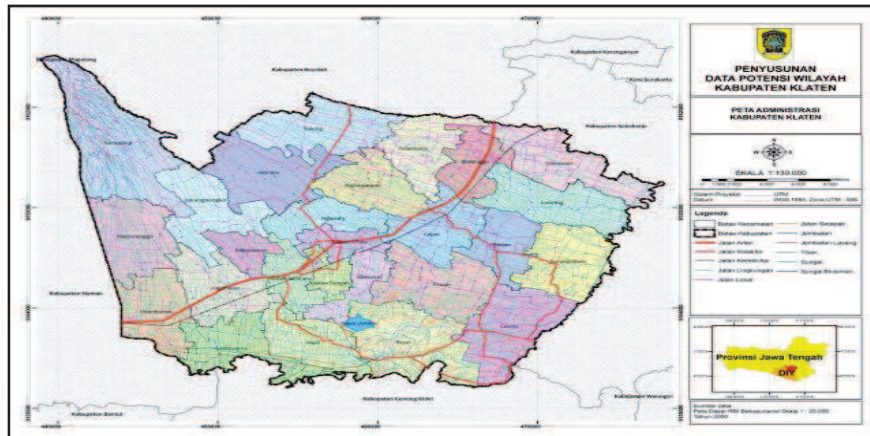
Diagram 3: Interactive Analysis

Result And Discussion:

The Condition of Minapolitan Area in Klaten:

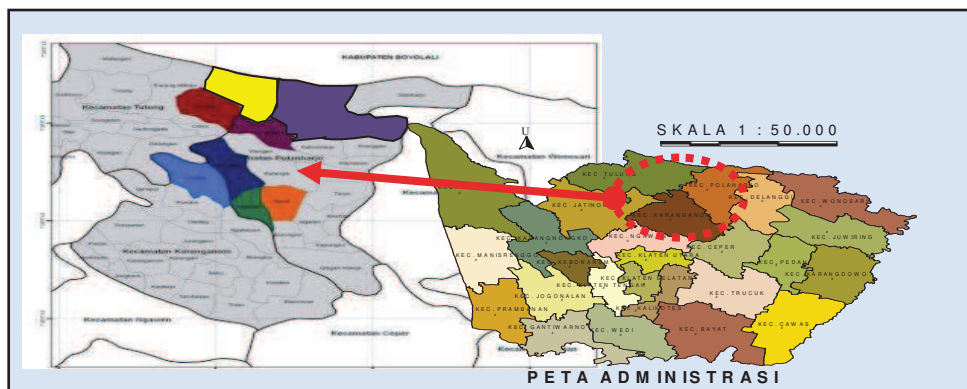
Klaten has large water resources potential and it has been exploited for fish industry in Polanharjo, Karanganom, and Tulung sub-districts. Fishery sector activities which begin in 2008 in those 3 districts are fishery cultivation development area program, especially the commodity of Nile tilapia in the form of rehabilitation, fishpond construction and fishery production facilities support for the cultivator groups in 3 villages, including Ponggok, Nganjat (Polanharjo

sub-district), Jeblok (Karanganom sub-district). In 2009, the villages are developed into 6 villages. The additional villages are Jimus, Janti (Polanharjo sub-district), and Daleman (Tulung sub-district). Therefore, on 6 March 2009, for strengthening and supporting the effort to develop Nile tilapia cultivation area, the Regent of Klaten defines those areas by the Regent Decree No. 523.3/124/2009 on 6 March 2009 and it is inaugurated by the Governor of Central Java on 10 March 2009 (Pujiasmanto, 2013). The area of Klaten district includes 26 sub districts with the location as follows:



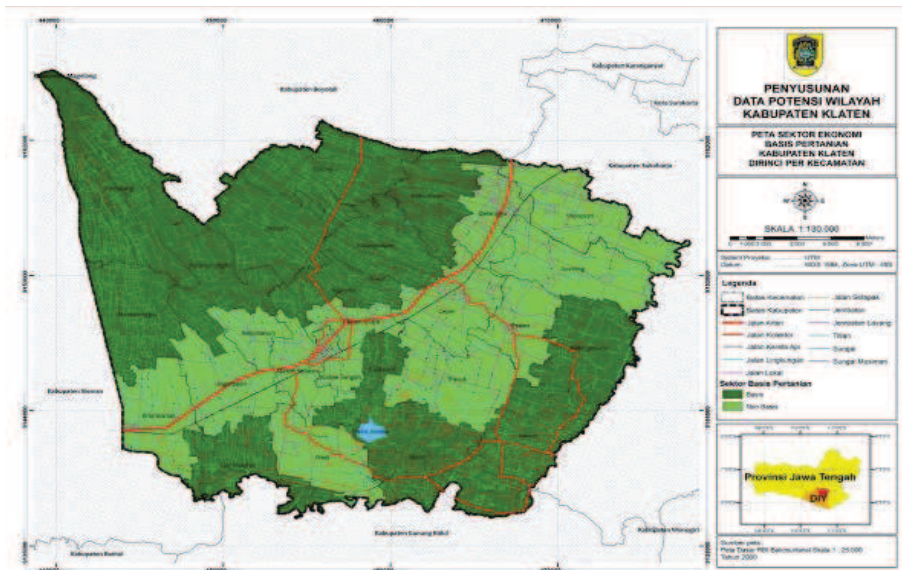
Map 1 : Map of Klaten District Area
(Source : The Data Formulation of Klaten Area’s Potential 2012)

Meanwhile, the Minapolitan area is located in 3 sub districts, comprising 8 villages with the location as follows:



Map 2: Map of Minapolitan Area in Klaten
(Source : Master plan of Minapolitan Area 2010 in Yudana, 2011)

The Potential of Fishery Resources Area in Klaten: As an effort to encourage the development of regional cultivation area in order to boost the economy and area development of regions, thus it has been regulated on The Establishment of 24 Cultivated Fish Production Center Locations the Directorate of Cultivated Fish No. KEP. 70/DJ-PB/2010 that Klaten belongs to the pilot area of cultivated fish production center in 2011. By the present development of fish industries in Klaten, hence, there are 2 villages which can be categorized into Minapolitan area development, including Sidowayah village of Polanharjo sub-district and Wunut village of



Map 3: The Potential of Agriculture and fishery basis in Klaten
 (Source : The Data Formulation of Klaten Area’s Potential 2012)

Table 1 : Lists of Water Resources/Springs in Fish Village Area

| N O | WATER RESOURCES / SPRINGS | LOCATION | | | THE WIDTH OF IRRIGATION AREAS (Ha) | THE UTILIZATION | | STATUS |
|-----------------------|---------------------------|-----------------|--------------|----------|--------------------------------------|------------------|--------------------------------------|--------|
| | | VILLAGE | SUB-DISTRICT | DISTRICT | | IRRIGATION (l/s) | PDAM (LOCAL TAP WATER COMPANY) (l/s) | |
| JATINOM BRANCH | | | | | | | | |
| 1 | Sigedang | Ponggok | Polanharjo | Klaten | 15 | 69.5 | 0 | Active |
| 2 | Cobowo | Ponggok | Polanharjo | Klaten | 1 | 1 | 0 | Active |
| 3 | Pelem and Penganten | Wunut-sidowayah | Polanharjo | Klaten | 287 | 250 | 0 | Active |
| 4 | Jeblokan | Ponggok | Polanharjo | Klaten | 117 | 85 | 0 | Active |
| 5 | Ponggok | Ponggok | Polanharjo | Klaten | 924 | 860 | 0 | Active |
| 6 | Kapilaler | Karanglo | Polanharjo | Klaten | 400 | 244 | 0 | Active |
| 7 | Nilo | Daleman | Tulung | Klaten | 128 | 100 | 0 | Active |
| 8 | Ingas | Cokro | Tulung | Klaten | 1195 | 1115 | 385/solo | Active |
| 9 | Paten | Gedong Jetis | Tulung | Klaten | 20 | 6 | 0 | Active |
| 10 | Gedongpel em | Kemiri | Tulung | Klaten | 12 | 11 | 0 | Active |
| 11 | Doyo | Wunut | Tulung | Klaten | 322 | 322 | 0 | Active |

Source : The Irrigation Sector of the Public Works Agency (DPU) of Klaten, 2011, in Yudana, 2011)

Tulung sub-district. Therefore, the areas which belong to Minapolitan area development in Klaten

are 8 villages within 3 sub-districts (Pujiasmanto, 2013).

This establishment needs to be a synergy with the condition and land potential of the sub-districts categorized as Minapolitan area in Klaten, including the potential of the land sloppiness, springs resources and accessibility as the main aspects in area development.

The development of Minapolitan area aims to encourage the acceleration of area development by fishery activities as the primary activity in boosting the societies' income and prosperity. This effort is conducted by encouraging the rural-urban linkage as well as the development of the system and industry of competitive, populist-based, sustainable (environmentally friendly), and decentralized (the control is on the local government and society) minabusiness in Minapolitan area (Pujiasmanto, 2013).

The sub-district contributing to the highest production is Polanharjo sub-district, followed by Bayat and Karangnom sub-districts. As seen from the data of the extent of fishery objects, hence, those production outputs shows that the extent of fishery objects do not determine the high number of fishery production output, particularly in Bayat which has a wider fishery objects than other sub-districts in Klaten. It is because the condition of the widest fishery object, that is marshes (Rowo Jombor) which depend on rainfalls as the water source, also affects the quality of fish produced (Pujiasmanto, 2013).

The types of cultivated fish in Klaten are freshwater fish, especially Nile tilapia and catfish. By knowing the number of the prime production, thus the development object which will be chosen as the main development direction can be determined. The following is the identification result of the consumed fish distribution and the realization of fresh fish in Klaten. The calculation process of water requirements employs the approach assumption that the amount of inflowing discharge of 0.3 liter, the outflowing discharge of 0.11 liter and the pond's width based on the available pond's width data, both seeding pond and rearing pond, while the water level refers to the standard of 1.2 m for the rearing pond and 0.6 m for the seeding pond.

The government of Klaten has as yet attempted to conduct various activities related to Minapolitan development, including giving elucidation and socialization about fish products towards highly exportable quality. However, there is no assistance yet, particularly fisheries, and network for marketing, even though the society has felt ready to develop fishery products.

In developing Minapolitan area in Klaten, there are several constrained factors. The marketing of the cultivated fish product is still in local scope and has

not been capable of penetrating national and international markets. It is because the fish quality is still below standard of fish export eligibility.

At present, there have been big industries in Klaten whose productions can fulfill the standard of export quality. However, the society who cultivate fish has not been able to reach this quality in managing their cultivated fish product. The society's skills in improving the product's quality in the process of rearing and processing the production output is relatively low. As a result, the society is unable to compete with big industries, such as PT. Aqua Farm. In addition, there is limitedness in obtaining qualified fish seeds. This problem indeed impacts on the quality of the production output, so that the fish produced is less qualified. The society also encounters difficulties in earning funds to develop their business. In this case, the business grants given by the government is still limited on particular regions and is uneven. Another constraint is that there is no control on the fodder price and the selling prices of seeds and production output from the institutions which have authority to deal with these matters. Consequently, the prices of fodder, seeds, and production output are still controlled by middlemen and other parties (Pujiasmanto, 2013).

The regional policies and development of Klaten refer to the policies on the development of Minapolitan area as follows:

1. The Regulation of Minister of Marine Affairs and Fisheries Republic of Indonesia No. PER.12/MEN/2010 on Minapolitan;
2. The Governor of Central Java Decree on The Development of Nile Tilapia Area Program;
3. The establishment of 24 Production Center Locations of Cultivated Fisheries Directorate General of Cultivated Fisheries No. KEP. 70/DJ-PB/2010 that Klaten district belongs to the pilot area of cultivated fisheries production center in 2011.

According to the potential and problems in regards to the management of fishery resources in Klaten, thus, the formulation of Policy, Method, Action (PMA) method is the foundation to determine steps in managing fishery resources so that it can boost society's economy and support food sustainability and security. This method emphasizes the role of all stakeholders consisting of the government, society, and private institutions. In this case, the government is the government of Klaten which is represented by related institutions such as the Local Development Planning Agency (Bappeda), the Department of Agriculture, the Environmental Agency, and the Society and Suburb Empowerment Agency. The society in this case is fish farmer societies who run business in fish cultivation. Nevertheless, the society

component also includes the society living in the surrounding fish cultivation area. Meanwhile, the private institutions in this context are non-governmental parties who run fishery business, including fish fodder sellers and fish product buyers. In this PCA method, all stakeholders should be in a synergy to realize a condition in which fish resources can be evenly utilized together so that it can bring benefits to the consumers and producers as well as to keep the preservation of available resources. The whole fishery stakeholders function as the axis and promoter to manage fishery resources in Klaten by

formulating policy, building commitment, and managing fishery resources by optimizing all available potential to preserve and utilize it evenly. (Pujiasmanto, 2013).

PCA method is a method to manage fishery resources as an effort to boost society's economy and support food sustainability and security. This method underlines the role of all stakeholders to formulate policy, make commitment, and take action in managing fishery resources to improve society's economy and support food sustainability and security. (Pujiasmanto, 2013).



Diagram 4: Method of Fishery Resources Management in Klaten (Pujiasmanto, 2013).

The Strategy of Minapolitan Area Development through the Utilization of Fishery Resources and Public Participation:

By considering fishery resources potential and participation of all parties, therefore the effort to develop fishery cultivation is expected to have direction, policy and development strategy which is capable of uplifting the area's potential to become the prime sector in the economic life of the local society.

The objective on function development are based on the potential and domination of Minapolitan area's activities, both those which are still developing and those which will develop in the future. From previous studies that have been conducted, hence, the objectives on the development of function and role of Minapolitan area are as follows.

1. **The Center of Freshwater Fish Cultivation:** As the center of freshwater fish cultivation in Klaten, the Minapolitan area is expected to accelerate the area's economic growth in fishery sector and fulfill the needs of fish in regional and national scale. Thus, it can boost the fish farmer society's prosperity and contribute PAD of fishery sector. Fish cultivation center comprises seeding, rearing and quality improvement.

2. **The Center of Freshwater Fish Processing:** Minapolitan area functions as the center of freshwater processing to process fishery products to be more diverse and fulfill the health standard and market demand. The processing can be done not only for fresh fish packaging, but also freshwater fish processing to produce more various products.

3. **The Center of Cultivated Products' Marketing and Freshwater Fish Processing:** The marketing center can cover the center of trade activity and service in fishery sector and fishery equipment. This trade activity is expected to be the promoter of economy in Minapolitan area and fulfill all fish farmer needs, including seeds, medicines, fish fodder, education and information.

The references in the attempt to develop Minapolitan area are 1) The Policy and Strategy of Cultivation Area Development; 2) The Policy and Strategy of Human Resources Development; 3) The Policy and Strategy of Water Resources Infrastructure Network System Development. Therefore, the most fundamental policy to accomplish the effort of fishery sector development is based on the utilization and control of fish production in Minapolitan area, so that there

will be integration between fish demand and production.

The integration can be realized by the use of resources sufficiently by keep considering natural resources preservation and the environmental support. In order to reach this integration, there are 3 things to consider, namely:

- a. The balance of fish production and the environment preservation
- b. In production process, the aspect of market demand as well as local and regional needs should be considered
- c. In processing and developing fish production, the cultural, social and economic values of the local society should be taken into account.

In developing Minapolitan area in Klaten, it needs sufficient supporting facilities and infrastructure so that the development of Minapolitan area can be done optimally. The facilities needed to support the development of Minapolitan area in Klaten are as follows:

- a. The Bulding Plan of Fish Markets in Minapolitan Area: In order to sell fish products, it needs a place which can accommodate all types of fish produced by Minapolitan area, including the products of seeding, rearing and processing.
- b. The Fishery Resources Management Institute: In organization context, the regent of Klaten has issued the Regent Decree No. 050/180/2011 on the Establishment of Coordination Team, Working Group and Daily Technical Actor of Klaten Minapolitan Area Development Program which mentions the task and function of every party.
- c. Media of Information and Fishery Promotion: In order to broaden the marketing network, it needs media of information and promotion in various

forms, including informational website and promotion of fishery products in Klaten.

- d. Banking Facility: For supporting the development of Minapolitan area in Klaten, there is a need of capital resources facility from various institutions, including banking institutions.
- e. Tourism, Recreation and Sport Facilities: The Minapolitan area in Klaten covering the main areas (Polanharjo, Tulung and Karanganom sub-districts) can be developed into *mina* potential-based specific interest tourism area or known as *mina* tourism or tourism *mina*.

Conclusion: The Results Of The Study Revealed That The References Used In Developing Minapolitan Area Are 1) The Policy And Strategy Of Cultivation Area Development 2) The Policy And Strategy Of Human Resources Development 3) The Policy And Strategy Of Water Resources Infrastructure Network System Development. Thus, The Most Fundamental Policies Pursued In The Development Of The Fishery Sector Is Based On The Utilization And Control Of Fish Production In Minapolitan Area, So As To Create Integration Between Demand And Production Of Fish.

Acknowledgement: The researcher team of the Suburban and Regional Development Research Center (PUSLITDESBANGDA) of the Research and Dedication to the Society Institute (LPPM) of Sebelas Maret University express a myriad gratitude to the Directorate of Research and Dedication to the Society (DP2M) of the Directorate General of Higher Education (DIKTI) of the Education and Culture Ministry of Indonesia who has given opportunity and trust as well as facilitated the research fund through the research program of National Strategy as the primary research of this research.

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