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# The Fishermen's Life in Argapura Laut Village of Jayapura City

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#### Abstract

Research has been conducted on the Fishermen Community in the Argapura Marine Village in Jayapura City. The purpose of this study was to determine the origin and lifestyle of local migrants from Ambai village on Yapen Island, located in Argapura Village. In conducting this research, the method used is descriptive qualitative which is intentionally used to determine the lifestyle and activities of the fishing population in the area. The population in this study were all residents who live in Argapura Kampung Laut, Argapura Village, Jayapura Selatan District of Jayapura City. The sample of this research was adult population who knows about the socio-cultural and economic conditions of the local population and can provide information in support of the research's purpose. The results showed that the population of Kampung Argapura Laut mostly rarely carried out activities as fishermen, even though the city government had provided assistance in the form of boats and supporting facilities for fishing. Residents mostly go fishing by basic fishing in Jayapura waters. The mobility of the population that is not fixed also affects the labor market that is not permanent and not clear to the local population so that it negatively impacts the daily lifestyle of the family.

Keywords: population, fisherman, economic

#### 1.0 INTRODUCTION

Livelihoods are a part of humanity's long history. The long history of humanity always follows the changes that occur in civilization that are adapted to the environment in which humans live. At first the human livelihood system began with a simple pattern of hunting and gathering and continued to evolve to adjust human needs based on the ability or reason possessed by every human being. Human dependence to meet basic life needs is very dependent on the natural environment in which they live. If the natural environment in which humans live has different characteristics, it will create situations that force humans to adapt according to human ability to survive in different ways. The ability to survive and adapt to the environment requires special knowledge and skills. For example, for people who live around the coast, already have knowledge of astronomy related to the seasons and the state of the sea, knowledge of how to make boats, knowledge of rituals before and after fishing, abstinence in fishing, fishing tools and so on. The local knowledge mentioned above is obtained from the results of continuous interaction between humans and the natural environment in which they live. Knowledge of how to read the tidal times of the sea during the day and night, the ability to read the movement of certain fish species at certain times always arises because of human interaction with the surrounding nature that has become a previous experience. The interaction between humans and the natural environment results in a very close and related relationship. The relationship between humans and the biogeophysical environment is not only a dependency relationship but also manifests in the form of relationships that influence each other and are able to change the biogeophysical environment (Poerwanto, 2010). The process of interaction between humans and their environment always occurs continuously so as to bring up a series of experiences which are then abstracted into concepts, theories, and education or guidelines for community behavior (Koentrjaraningrat, 1981).

One of the abstractions is traditional knowledge, that every ethnic group in the world has knowledge about: the natural surroundings, flora and fauna nature in the area where they live, substances, raw materials and objects in their environment, the human body, traits the nature and behavior of others in time and space (Koentraningrat, 1981). Forde in Poerwanto (2010), states that the nature of the relationship between human activities and their environment is bridged by cultural patterns possessed by human beings. Through its culture, humans are able to adapt themselves to their environment, so that they are able to carry on their lives. Culture itself is actually the result of the process of adaptation and learning from humans with the natural environment. One manifestation of that culture is the traditional knowledge system, better known as local wisdom. One of the local wisdoms that will be discussed in this paper is the

traditional knowledge system of fishing communities. According to Adimiharja (2003: 29) traditional wisdom reflected in local knowledge and technology systems in various regions dominates the traditional values as seen from the ways they carry out the principles of conservation, management, and exploitation of natural resources, the economy and social. In the coastal community of Jepara Beach, they have different sea habits in terms of the habit of reading the season of fish and fishing culture. Bajo people on Wangi-Wangi Island are known as seafarers because of their toughness in navigating the sea at such great distances from the coast to search for fish. Bajo people are known as seamen who are diligent and patient in their activities as fishermen. Birth, life, death and marriage are carried out on pinisi boats which are used as a place to live as well as a means of transportation in the sea. Knowledge of fishing (local idioms) of Sangie Talaut in fishing is known as "Eha" and "Mane". Eha according to the beliefs of the Sangie Talaut is a traditional ritual that is intentionally carried out to keep fish in the surrounding sea from being hunted and allowed to spawn and breed. While "Mane" is a traditional ritual performed as a sign that the sea products that were previously guarded through the "mane" oath have been completed, so that local residents can freely search for fish in certain areas that were previously given the "mane" oath.

In the area of Papua, found a variety of ways to go to sea in the midst of Papuan life. This can be seen from the differences in cultural values found in 7 (seven) customary territories in Papua, specifically in the customary territories of Mamta, Saireri, Doberai, Bomberai and Anim-Ha. Fishermen in the north coast of Papua, which are mostly included in the Mamta (Mamberamo-Tami) customary area, have a habit of fishing / fishing that is different from the habit of fishing for people who live in the Saireri (Biak and Yapen) customary areas. Likewise, the habit of going to sea is found in the inhabitants who inhabit the customary territory of Bomberai (the coast of Manokwari to the Raja Ampat islands) including coastal areas. Including the Fak-Fak coast, Kaimana, Asmat to Merauke which are included in the Domberai traditional territory. The habits of fishing and equipment to go to sea are adjusted to the environment in which they live and the ability to reach fishing locations. In general, fishermen in Papua are based on ecosystem areas that support their activities as fishermen, known by two categories of fishermen namely coastal fishermen and pure marine fishermen. Coastal fishermen are residents whose fishing activities are only carried out around the coast which is not far from the coastline. Tend to collect marine products by going along estuaries and river banks. Residents who use this pattern are in the southern Saireri indigenous territories ranging from waropen to the Wasior / Manokwari area and in the Fak-Fak area, Kaimana to the Merauke area.

While pure marine fishermen are fishermen whose lives depend more on the sea. Pure marine fishermen in the Papua region are usually found in local Papuan residents living in archipelago areas such as Biak, Yapen and the Raja Ampat islands. To distinguish the social status of coastal fishermen and pure marine fishermen it is usually seen from the type, shape and quality of the boat used for fishing. Usually considered the shape, type and size when the boats are in the coastal plain. Papuan residents who work as professional pure marine fishermen usually indirectly judge by observing boats moored on the coastal plain. If the type and shape of the boat as well as the quality of a type of wood that is not resistant to waves and salt water content, is unable to survive for a certain period of time, only contains one person, it is certain the boat owner is a coastal fisherman and this is related to the number of fish and large fish is usually obtained. If the boat he sees, has good quality raw material for making boats, has a size of a boat with a width, enough boat space to load more than 3 to 4 people at once, then certainly the boat owner can calculate all kinds of equipment that must be prepared for fishing, time at sea, the range of places where it goes to sea and the number of people who go to sea and how their respective duties and roles when they are at sea.

Boat owners like this usually prefer to go to sea in the high seas far from the mainland with enough provisions. Before the sea technology like this was spoiled by the current sea habits that tend to use Jhonson motor/outboard motors because of the desire to obtain results in large quantities and reduce the time to sea. The habit of going to sea using a relatively large rowing boat, has enough space in the boat to accommodate more fish found in traditional fishermen who live on Biak Island. For generations, the characteristics of the original Biak people who lived and settled on Biak Island until now are known as three things that should be owned as Biak people, namely the House (Rum) which symbolizes a place of residence or country and Boat (Wai) which symbolizes the pedigree or the ancestor and Parang (Source) which symbolizes creativity or work. Whereas fishermen in other regions are generally categorized as coastal fishermen. Fishermen in the Raja Ampat archipelago are generally fishermen whose original area of origin is from Biak Island. Even so, the group of islands facing each other from one island to another so that the ability to go to sea in the open sea is still classified as semi-pure marine fishermen, for example in Waigeo, Batanta, Missol and Salawati because they are still protected from free wind that does not affect the resilience of fishermen in surrounding area. Also residents from the island of Biak, which before the first world war occupied several neighboring islands, are still spoiled in terms of fishing by local migrants from Sulawesi, Maluku and surrounding areas. Missol Island, for example, has a part of its territory controlled by residents of the Tobelo people. Even a special settlement has been established for the Tobelo people. Tobelo migrants in the Missol area in their daily lives practice the culture of fishing for indigenous people of the local area.

The transfer of science and technology in fishing is learned through traditional knowledge systems built through the presence of these migrants and is not entirely an inheritance / heritage value from the people of Biak Island who currently live in the Raja Ampat archipelago. Likewise, migrants from Yapen Island in the Saireri Strait, which since the 1970s have occupied the Argapura Laut region, are known as local residents from Yapen Island, where most of the residents work as fishermen. Knowledge in terms of reading the right signs at sea, has become a tradition for local residents. Traditional wisdom or knowledge is a concept or local knowledge system that is owned by traditional communities in an area (Mitchel, 1997). Local wisdom is a set of knowledge and practices derived from previous generations, as well as from experiences relating to the environment and other communities belonging to a community in a place that is used to resolve properly and correctly the various problems and / or difficulties encountered (Ahimsa, 2008: 12). In the Indonesian Dictionary, "wisdom" comes from the word "wise" which means, (1) wise, clever and clever, (2) understanding and understanding. The word wisdom means wisdom or scholarship (PPPB Dictionary Drafting Team, 1995 in Suyami (2005: 4). Based on this understanding, the word "local wisdom is defined as wisdom or knowledge possessed by a community in order to manage the environment, that is knowledge that gives birth to behavior the result of their adaptation to the environment, the implication of which is environmental sustainability and long-term sustainability (Sumintarsih in Suyami et al, 2005: 4).

Local knowledge develops in local communities based on proven experiences over a long period of time, is well adapted to the culture and local natural environment, and changes dynamically (IIRR, 1996). Therefore, the local wisdom of each ethnic group will definitely change, depending on how each ethnic is adjusted. However, local wisdom, like other cultural elements, will experience changes slowly and very long, because the process of adaptation and adaptation will proceed slowly so that it does not cause a cultural shock. In terms of language, local wisdom means local wisdom or local knowledge, which can be understood as local ideas that are wise, full of wisdom, of good value that are embedded and followed by members of the community. In the concept of anthropology, local wisdom is also known as local knowledge (indigenous or local knowledge), or local intelligence (indigenous genius), which is the basis of cultural identity (cultural identity). Local genius can be interpreted as a local idea full of wisdom that is of good value. In the wisdom of local culture (local wisdom) contained is local knowledge that is integrated with belief systems, norms, and culture expressed in tradition and myth. In his book entitled Social Anthropology (1990: 8-9), Koentrjaraningrat categorizes local wisdom throughout the world. The category of local wisdom is divided into seven, namely: (1) knowledge about nature, (2) knowledge about flora, (3) knowledge of natural fauna, (4) knowledge of substances and raw materials, (5) knowledge of the human body, (6) knowledge of human behavior and (7) knowledge of space, time and numbers.

Changes and shifts in local wisdom will result in the extinction of some local knowledge that is owned by the community naturally in accordance with the development of their own culture. In the last decade the speed of loss of traditional knowledge has increased very rapidly. This then raises many concerns of various parties. A variety of useful and valuable knowledge that has not been widely disclosed, may also become extinct, as is the source of germplasm in the biological world. To overcome this there are several things that can be done, among others: Increase awareness of the value of local wisdom for development, help local people conserve their local wisdom, ocument and use local wisdom in application development projects, ensure that the documentation on local wisdom is also available to the local community concerned, and paying attention to intellectual property rights when documenting, recording and researching various things about local wisdom (IRR, 1996).

# 1.0 MATERIALS AND METHODOLOGY

Research with the title of Fishermen Community in the Argapura Sea Village of Jayapura City was carried out using a qualitative approach. A qualitative approach or research emphasizes the perceptions of participants 'or informants' experiences and how to understand meaning, not just one but many realities. The purpose of qualitative research is to understand the situation of certain events, groups or social interactions (Cresswel, 2010: 292-293). The following research road map is illustrated in the following diagram:

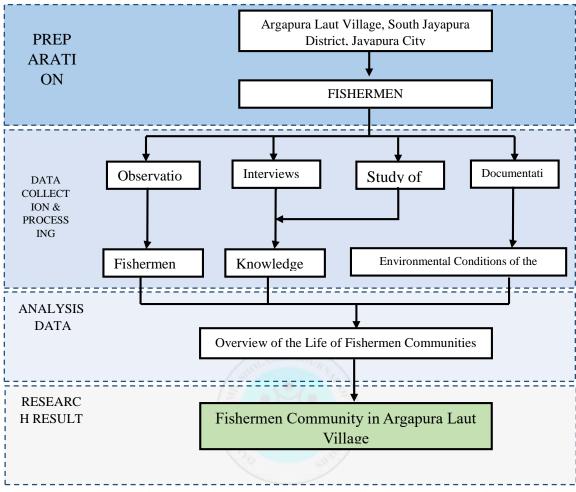


Figure 1. Load Map of Fishermen Community Research in Argapura Laut Village

#### 2.1 Data Collection Techniques and Tools

Observation: According to Adler and Adler (2009: 523) in Ratna (2010: 217) all social world research basically uses observation techniques. The most important factor in this technique is the observer, the informant and the surrounding environment. Observer involves three aspects at once, namely a) the local location of the research taking place, b) the actors with certain roles, c) the activities of the actors used as the object of research (Ratna, 2010: 220). According to Adler and Adler (2009: 523) in Ratna (2010: 217) all social world research basically uses observation techniques. The most important factor in this technique is the observer, the informant and the surrounding environment. Observer involves three aspects at once, namely a) the local location of the research taking place, b) the actors with certain roles, c) the activities of the actors used as the object of research (Ratna, 2010: 220). This data collection technique continues throughout the stages of data collection in Argapura Laut Village, by not intervening so that the situation runs as usual so as not to interfere with objectivity. Observation is done in two ways, namely free observation and participation observation. Free observation is carried out without being involved in the environmental activities of an object. Observation of participation was carried out by becoming involved in the daily activities of the community in Argapura Laut Village. These observations are usually combined with interview techniques. Although participatory observation is a technique to be able to obtain indepth data when combined with interviews, it must still be within the norms and values that are shared by researchers.

Interviews: Interview technique is carried out to obtain data directly from informants using in-depth interview techniques. So that interviews are not biased, then the interview guidelines (intervieuw guide) that have been prepared are used. Interview guidelines are a tool to stay on top of the research topics you want to know. The core of this technique is the researcher himself as an instrument, who must really master the questions he has compiled, so that in practice interviews will flow more flexibly. Although using interview guidelines, the form of questions can be open

(open interview), so that the informants can freely inform maritime knowledge that is known to them. Usually in interviews will flow information that is interconnected to one another and questions and answers will increasingly develop. For this reason, interview guidelines are needed to fit the desired corridor.

Literature Review: Literature study is carried out before and after taking to the field to collect data. This literature study is a data collection technique that is carried out continuously throughout the research process. Literature study is carried out by collecting and studying various literatures, archives, and documents that are relevant to the subject matter in research. The results of the literature study are used as background and reference material that will support the writing of this research report.

Field Notes: Data collection techniques that also need to be used are field notes. The recording was carried out from the trip to the research location to the trip back to the place of origin. Everything becomes important to note such as the conditions during the trip, the atmosphere, the condition of the village where the study was, the friendliness of the population, obstacles, obstacles, good and bad impressions, and so on. This field note is very important and very helpful in making research reports, to get an impression during the study as well as small things that are often forgotten but very important.

Recording and Documentation: The next data collection technique is recording and documentation. Recording is done using a recording aid. Recording needs to be done considering the limitations of the human brain in remembering things. Recording is urgently needed during interviews with informants, to store information about the topic to be studied. The documentation technique is done by taking pictures using tools such as a camera for photo formats and video formats. Documentation is very important to support research reports, so that readers can see the atmosphere at the research location. The documentation includes a picture of the atmosphere of the location, the community, infrastructure, living equipment and so on.

Determination of Location and Informants: The location of the research on the local knowledge of fishermen is in Kampung Argapura Laut, Jayapura Selatan District, Jayapura City. This village was deliberately chosen because of its geographical position which is directly opposite the sea around Jayapura. With that condition, it will be seen about how the activities of fishermen there, in dealing with such natural conditions, and also want to see whether with these conditions affect the activities of fishermen in the Argapura Sea Village. Interviews on research on the location of the fishermen of Argapura Laut village regarding fishing activities, were carried out mainly on informants namely the fishermen of Argapura Laut village and the families of the fishermen and important people around them such as traditional and religious leaders, and certain groups of fishermen who had significance with some information needed. Informants were also taken from women in fishing families to get an overview of the daily lives of fishermen, from the point of view of women.

Data Analysis: Data analysis is an ongoing process that requires continuous reflection on data, asking analytical questions and writing short notes throughout the study (Craswel, 2010: 274). Data analysis model used in research on the knowledge of Argapura Village fishermen is a data analysis model in qualitative research.

#### 3.0 RESEARCH FINDINGS

#### 31. Geographical Conditions

Argapura Laut Village is located in Argapura Sub-District, South Jayapura District. Located in the northern part of Argapura Beach. The settlements are built on shallow, curved seaside and are in line with the Argapura and Weref land. Local residents more often call it by the name of Argapura Laut. The area of settlement in Kampung Vietnam based on the Argapura Sea Village in 2019 is 350M². The topography of the Ambaidi Argapura Beach migrant village is located in the tidal area. The surrounding rock types consist of a combination of sedimentary rocks, metamorphic rocks and rock carts which are the result of faults. The part of the rock is sediman and metamof rocks located to the west, while the part of the rock consists of fractured rock carts concentrated to the east. Such topographic conditions cause the surrounding population to tend to build houses in dry areas and directly adjacent to the tidal boundary. The slope of approximately 70 percent causes some residents to tend to dredge rocks and mounds of land in an area that can be used for the expansion of the yard, as well as the way for residents around to be free to move.

#### 3.2 Population

The total population of Argapura Laut Village is 952 people spread over 4 (four) Neighborhood Groups (RT). RT 1 is located on land, while RT 2, 3 and 4 of its settlements are above the sea which is a tidal area. These three RTs have houses that have direct contact with the surrounding sea. There is a connecting bridge between the mainland and the houses that are usually passed by local residents.

#### 3.3 Livelihoods

The livelihoods of residents of Argapura Laut Village are dominated by livelihoods as fishermen, civil servants, police, civil servants and entrepreneurs. Work as an entrepreneur is mostly done as a docker (TKBM), and a construction worker. Work as a construction worker and as a TKBM is usually done as seasonal work when fishing activities are rarely carried out during the wind season. When the wind season and weather at sea are not friendly, fishermen usually find it difficult to fish, so they prefer odd jobs that can be done to earn income.

#### 3.4 Language

In daily communication, the people of Argapura Laut village use more Ambai and Ansus languages. Even so, the local population in this village is dominated by the Ambai language. This is due to the male population who married women from the Ansus tribe (West Yapen) and lived in Argapura Laut village and also men from Ambai village who married women from Ambai village (married in) so they lived together in Argapura Laut village when in Jayapura and every day communication with Ansus and Ambai languages. However, in daily conversation with local residents and non-local and non-Papuan residents, Indonesian is always used as an intermediary language.

#### 3.5 Religion

As residents who have local cultural values in their respective areas of origin, residents of the Argapura Laut village during their stay in Jayapura City, have regile values that relate to beliefs about positive and negative values. For example, belief in traditional rituals related to death, the sea and the surrounding environment.

#### 3.6 Family System

The family system of the Ambai people is almost the same as the kinship system found in other tribes on Yapen Island in general and also in other regions in Papua. Likewise, for the marriage system, residents of Ambai use money and plates as a means of payment of wedding gold up to the process of payment of wedding gold by men to women which is carried out through party events according to local culture.

# 4.0 DISCUSSIONS

# 4.1 Maritime aspects of the Argapura Laut fishing village residents

As fishermen, the residents of Kampung Vietnam have local wisdom regarding those related to fishing habits at sea. According to the Ambai, to ensure that certain positions in the sea there are certain amounts of fish that can be lured, usually residents look for areas in the coastal area or land there are headlands, hills or mountains and there are piles of rocks in large quantities in the area of waves. According to Ambai beliefs, such situations usually invite various fish to gather and find food. Another situation that is usually used as a sign that at some point there are fish is when there is a crowd of cranes that fly in a low position near the surface of the sea while pouncing on fish swimming in the water surface. This situation according to the Ambai people, if there are fish in a certain size that form a formation and then comb through certain points on the surface of the water, indicating in the vicinity there are fish in large sizes that hunt to eat it. Certain fish are usually targeted when fishing in certain areas close to the arrival of the fish season. Situations like this are usually used by Ambai fishermen to hunt and catch fish of a certain size and become the target of fishermen.

### 4.2 Sea fishing equipment and Argapura Laut Village Fisherman Technology

The type of boat that is usually used by Ambai fishermen for fishing consists of a speed boat. The choice of use of this type of boat is related to the history of fishing and the time and distance to sea. Speed boat type boad has advantages over seman boats (which are made from wood) because the speed boat body does not suck seawater. Whereas wooden boats are vulnerable to the sun's heat and water suction quickly occurs. In addition to the type of boat used, Argapura Laut village residents when at sea use various types of fishing rods in the form of nelon and hook in various shapes and sizes (hook number). The hook number used is numbers 6.7 and 15. The hook number 6 is usually used when fishing for yellowfish and yellowtail fish. While hook number 7 is usually used when fishing for red fish, kawalina fish and kombong fish. Hook numbers 6 and 7 have a large shape and size. While hook number 15 is a small hook. Hook number 15 is usually used to fish small fish.

For other fishing equipment such as molo guns, it is rarely used. Only certain fishermen who have the skills to dive and search for certain fishes on the seabed (shallow water) find fish using molo guns. According to local residents, molo guns are more widely used by residents from Kampung Ansus, who currently inhabit the area of dock 9 in the district of North Jayapura. Meanwhile, residents from Kampung Ambai who currently inhabit the Argapura Laut Village, do not use molo guns to search for fish. Including using traditional nets. Other fishing gear commonly

used is to use a fish arrow tool (kalawai). Kalawai is usually used when fishing at night when the water is receding. Likewise, for the use of explosives, local residents still use it clandestinely, despite a ban from the police.

# 4.3 Local Knowledge Regarding the Time and Location of Catching and Types of Fish Captured

As a fisherman resident, local knowledge about fishing time, fishing location and types of fish caught have been known as part of the local wisdom of the local population. In terms of fishing time and fishing location, the people of Argapura Laut village, in general, do not know the fishing time and season. This is influenced by the residence of residents who mingle with other residents (both Papuan and non-Papuan residents) with a variety of different activities, so residents tend to observe certain situations that are a sign of the number of fish in a place. Vietnamese villagers in reading certain situations related to the fish season, are usually observing certain fish that appear certain areas such as puri fish. If puri fish appear in large numbers and move around in position, it means that in the vicinity of the puri fish there must be large fish, such as grassfish, yellow tail fish, sharks and other types of fish. The puri fish is a kind of fish that are small in stature but often appear in the thousands and form in certain radius meters at the surface of the water. Puri fish is usually the target of large fish as food. The presence of puri fish then becomes a special sign for the fishermen of Kampung Argapura Laut to hunt big fish that continue to lurk the movement of puri fish. According to residents of Argapura Laut Village, if waves occur within a certain period of time, residents of Kampung Vietnam rarely go to sea. More stay at home or do other work that can report additional income, such as working as a construction worker or loading and unloading labor at Jayapura Port.

# **4.4 Distribution of Catches**

The way the people of Argapura Laut Village market their catches is to sell their catch directly to the Fish Market or sell it to collectors. The tendency to sell to fish collectors in the fish market is caused by selling time and other activities and sudden needs in the family that must be met as soon as possible. According to the results of discussions from several residents from Argapura Laut Village, the types of fish that are usually sold to fish collectors at the fish market are kombong fish and small sized rock fish that are caught in large quantities with nets. The size and size of fish prices are usually adjusted to the container used to fill fish, such as medium and large buckets.

#### 4.5 Obstacles

The main obstacle that is usually experienced by fishing residents in Argapura Laut Village is the availability of fuel oil. Fuel oil is related to the frequency of fishing at sea. If the number of liters of fuel oil is limited, time to sea will be limited. The pattern of fishing that is usually used by using fuel oil is tug fishing and basic fishing. Delay fishing usually Argapura Laut village fishermen use as much as 200 liters of gasoline and must spend the night in the middle of the sea and provide kulboks (fish cooler boxes). In addition, the price of fish in the market is often uncertain because of the large number of fish collectors in the fish market. Usually fish sold in the market to buyers are the result of distribution from the third container. The main container usually picks up the catches of fishermen who are looking directly at the sea, then sells it again to other containers that are anchored and even stand guard on the harbor of the fish port. This second collector then sells again to the next collector who then sells the last to the buyer. For example, the selling price per fish by fishermen looking for fish directly in the sea is sold per fish IDR. 40,000. Then bought again by the next container who stood guard around the pier at a price of IDR. 60,000. The second collector then sells it again to the last collector at a price of IDR. 80,000 - 100,000. No wonder the price of fish in the market often exceeds the average price of fish which is usually easily accessible to all people.

#### 5.0 CONCLUSIONS

Realizing the impact of activities as fishermen who often bring disaster to themselves, their families, other general public and the surrounding physical environment, then: It is necessary to have a solution that is thought by the government to change the mindset of the local community, so that there can be an effort to harmonize the activities of the local population with the surrounding environment.

Various local potentials can be explored from the local wisdom of the local population, such as skills education for other activities such as skills education related to the way fish farming into salt fish or sea fish farming into canned fish developed through the establishment of special containers for fishermen to learn or attend special courses related to the development of his profession as a fisherman.

Collaboration between village officials through the RT and RW Chairmen can work together with the Regional Government through the Fisheries and Maritime Affairs Department to develop short-term and long-term programs that can recruit young / adult residents, both men and women to take part in skills education.

Other cities such as those in other archipelagic provinces in Indonesia, some of which have introduced ways to care for and develop marine areas that have damaged coral reefs or reduced marine biota, for example by residents of

the Thousand Islands District in the waters of Jakarta, Nusa Landmark West and East Nusa Landmarks. As an archipelagic district, obviously one of the main livelihoods of the local population is working as a fisherman. Therefore the sea around is very wisely and wisely managed because according to him the sea is our home, our garden and our yard.

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