Coastal Rural Development Planning: Fishery Food Management

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ABSTRACT

The planning of coastal villages based on fishery food management is intended as an approach to strengthen coastal communities to alleviate rural poverty. The pressure on the coast from both anthropogenic processes causes the declining of fishery food supplies. The purpose of this study is to assess the relationship among variables affected fishery food in coastal villages, and to choose the priority to solve degradation of fishery food supplies. Case studies were selected at Tamban beach, Malang Regency. The research method used Partial Least Square (PLS) and Analytical Hierarchy Process (AHP) approach. The results show that the coastal rural development planning based on fishery food management is strongly depending on the relationship among the agricultural environment, alleviating rural poverty and fishery food management. The priorty parameter for the agricultural environment is that the role of private sector and handling skyrocketing food prices. whereas, the priority solution for rural poverty is that supply access on education and health as well as supplying growth opportunity for job creation. Furthermore, the priority for fishery food management is to increase capacity of local people capacity to prepare management plan and the second priority is that the government provide policy and regulatory framework.

Keywords: Coastal Ecosystem Restoration, Fishery food management

INTRODUCTION¹

The objectives of this reserach is to assess whether the management of fishery food in coastal villages is available significantly and whether the concept of a Coastal Ecosystem Restoration Plan as part of village planning can support sustainable coastal communities.

In coastal areas, the livelihoods of coastal communities are more dependent on fish resources namely: pelagic fish, demersal fish, and shellfish. It is an effort to improve sustainable food security and even that it takes place for generations. The community makes fishing and fish farming efforts to improve the local economy. However, current capture fishing efforts decline, meanwhile, the effort to fish cultivation is increasing. This is due to the increasingly unfavourable waters conditions as a fish habitat and shellfish. Factors that greatly affect the decreasing number of capture fisheries are the problem of pollution, siltation due to land use change in upland area, and overfishing. A number of species experience significant population decline and are under threat of extinction. This result in the number of fish catches in the wild can experience a general decline.

The decline in fish production will result in the income of fishermen. Decrease in income will affect the availability of food for fishermen and the community. However, if it goes on continuously, it will result in the inclusion of fishermen and their families in a poverty trap. Factors that causing the decline in fish production is influenced by many factors, one of them is due to the influence of global warming that affects the number of fish in the oceans. Other factors are due to anthropogenic factors such as pollution caused by human waste that is directly discharged into the sea without processing, and the use of potassium to catch fish in an instant manner. Based on the above problem, it is necessary to prevent the fishermen from getting caught in poverty, therefore, it is necessary to manage the proper and sustainable fish habitat to keep the fish stock. The necessary approach is to keep coastal ecosystem condition healthy and avoid the influence of human activities.

[1]States that the adaptation option is based on vulnerability assessment with 3 (three) factors approach, namely: exposure factor, sensitivity factor and adaptive capacity factor. Based on the exposure factor approach is that the development

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of fishery catching (post harvest) is accompanied by efforts to increase the added value of capture fisheries production including improving facilities and facilities of fishery ports. For sensitivity factor, it is necessary to provide alternative livelihoods for fishermen to overcome the famine period or to shift fish catch potential. Temporal migration that has been done by fishermen can also be an alternative adaptation, but needs to be supported by comprehensive information about the potential of fish catch. In addition, the optimization of the potential of aquaculture should be encouraged. While the adaptive capacity factor is done by improving the weather information system that has been built in order to be utilized by the fisherman maximally, supplemented by the development of potency fishing information system.

The impact of climate change on marine ecosystems can affect the marine fisheries sector. According [2], due to that generated for socioeconomic life fisherman is the increasing cost of going to sea changing the behavior of fishing sea. Based on the model estimation results overall, show that behavior fishermen catch fish will move place based on the information always is compromised. But the fishermen do not know whether the information they receive can be really give you an advantage on them or even harm. Therefore, local governments need to take steps adaptive steps in the short term as well as in the long run. For the term short local governments need to provide subsidize the cost of fishing at the fisherman tailored to their category.

Another approach to managing the decline in the availability of capture fisheries is the coastal ecosystem restoration approach. The result of research by [3] mentioned that the research results obtained the main priority order of handling of coastal ecosystem damage is mangrove forest, second is coral reef, third is estuary area, and fourth is sea grass area. Therefore, to use coastal ecosystem restoration approach used Institution approach which is responsible to handle damage level of coastal ecosystem. These institutions include: government villages supported by the Regional Deviance Organization (OPD) at the district level. In addition, the role of government, private and community is the key to the successful implementation of restoration. Technical instructions the implementation of coastal ecosystem-based restoration of co-management is necessary for restoration coastal ecosystems. Furthermore, [3] mentions that the results testing with the PLS model shows that the role of the community is very high in value and plays an important role in the handling of integrated ecosystem restoration.

Furthermore, [3] mentions that the results testing with the PLS model shows that the role of the community is very high in value and plays an important role in the handling of integrated ecosystem restoration. To determine coastal ecosystem priorities, it is necessary to define four criteria, ie benefits for communities, ecological benefits, social benefits, and restoration of damage levels. Priorities will be determined by the community itself, supported by policies from local governments with the private sector. After that, the ecosystem priority mapping is handled in a coastal area. Furthermore the map of the results of deliberations then in the planned block of activities per year for 5 (five) years ahead. In determining the type of ecosystem, it must be adapted to the type of habitat, both for mangroves, coral reefs, and seagrass beds. With such an approach, it is expected to reduce coastal damage including improving spawning, breeding and nursery habitats.

MATERIALS AND METHODS

The types and the number of respondents can be seen on the table1. It is assumed that the total sample of 21 respondents represents the community in Tamban beach. The time to survey the respondents for interviews take place on 13 april until 15 april 2018. Figure 1 shows the location of research area.

No The Types of Respondents The Number of Respondents Community groups of supervisors 1. 5 2. The fishing community 5 3. NGO 3 4. Village officials 4 Small Business 4 5. **Total Respondents** 21

Table 1: Respondents in Tamban Beach, Sumbermanjing Wetan District, Malang Regency



Figure 1: Location of Research area

Description of Tamban beach

Tamban Beach is located on the edge of the Indonesian Ocean and is administratively included in the Tambakrejo Hamlet, Tambakrejo Village, Sumbermanjing Wetan District, Malang Regency, East Java. Tamban Beach is famous for its typical calm waves at certain times. But the waves will turn very violent in a short time. The fishing communities in this region are very dependent on the catch fisheries. However, there are also people who depend on tourism services.

Based on data from the port of Pondok dadap in June 2016, tuna is the dominant fish caught ie about 64%, followed by skipjack (20%), cob and kite (2%), marlin (1%) and the last lemadang (0.01%). Furthermore, [4] mentioned that due to the large Catch Per Unit Effort (CPUE) decline of 43% in 2014. A substantial CPUE decline also occurred in 2006 of 37% [8]. The decline in the production of capture fisheries will threaten the food security of coastal communities. In that connection, it is necessary to frame the mind as the material for the structural model design of PLS analysis. Figure 2 below shows how to plan for coastal village development based on fisheries food management.

Frame work of this research

Based on figure 2 shows on the last page in this paper, there are five factors as a basic to plan

coastal rural development to reduce rural poverty. They are covers: (a) The environment surrounding agricultural and rural development; (b) Rural poverty; (c) Fisheries product from marine science; (d) Fisheries food management; (e) End poverty and end hunger.

The environment surrounding agricultural and rural development covers: rapid advance of globalization, Climate change, skyrocketing food price, growing demand for biofuels, and the expanding participation of the private sector. Rural poverty covers: a high risk environment for households, seasonal income and lack of food supplies, low access on advance and health, limited growth opprtunity, geographic constraints, and living on less than USD 1.25 per day. Fisheries product from marine science covers: coastal degradation, excessive fishing ressure, growing organic pollution, toxic contamination and climate change. Fisheries food management covers: creating more employment opportunities, involvement stakeholders in planning stage and decision process, the role of the policy and regulatory framework and lack of capacity to prepare management plans. Whereas, to end poverty and end hunger covers: blue economy and sustainable development.



Figure 2: Framework for Coastal Rural Development Planning Based on Fisheries Food Management

Structural model of PLS

Researchers have applied partial least squares (PLS) path modeling to analyze complex relationships between latent variable constructs. Many fields of research have embraced the specific advantages of PLS path modeling, for instance behavioral sciences [5]. As stated by [6], PLS is path modeling's popularity among scientists and practitioners is due to four genuine advantages: Firstly, PLS does not require assumptions about the number of populations to be measured. Secondly, PLS can be used when the measured population distribution has a highly skewed. Thirdly, PLS can be used to estimate the relationship between latent variable constructs with multiple indicators despite small sample counts. Figure 3 below indicated the structural modeling of coastal rural development.



Fig 3: Structural Model for Coastal Rural Development Planning Based on Fisheries Food Management

Remarks:

- X = The Environment Surrounding Agricultural And Rural Development
- Y = Rural Poverty
- Z = Fishery Food Management
- X1 = Rapid Advance of Globalization
- X2 = Climate Change
- X3 = The Expanding participation of the private sector
- X4 = Growing Demand for Bio fuels
- X5 = Skyrocketing Food Prices
- Y2= A High Environment for House holds
- Y1 = Limited Growth Opportunity

Analytical Hierarchy process (AHP)

AHP helps decision-makers choose the best solution from several options and selection criteria. AHP builds a hierarchy (ranking) of decision items using comparisons between each pair of items expressed as a matrix. Paired comparisons produce weighting scores that measure how much importance items and criteria have with each other. [7] mentioned that modern Day decision-making has been inherently complex when many factors have to be weighed against competing priorities. One of the modern tools developed in the last 30 years used to assess, prioritize, rank, and evaluate decision hoices is the Analytic Hierarchy Process (AHP). However, AHP has limitation as a tool for decision process. As stated by [8] noted several limitations. One, AHP was criticized for not providing sufficient guidance about structuring the problem to be solved, forming the levels of the hierarchy for criteria and alternatives, and aggregating group opinions when team members are geographically dispersed or are subject to time constraints. Team members may carry out rating items individually or as a group. As the levels of hierarchy increase, so does the difficulty and time it takes to synthesize weights.

RESULTS AND DISCUSSION

Results and discussion of PLS processing

Processing data already obtained, then, they processed with PLS. The analysis of the PLS relationship between the variable constructs of the rapidly growing globalization (X1), climate change (X2), the expanding participation of the private sector (X3), the growing demand for bio fuels (X4) and skyrocketing food prices (X5). The relationship between the variable constructs with each indicator is analyzed whether it has a significant relationship.

The discussion is that based on the convergent validity test results obtained the magnitude of the indicator coefficients for the Rapid Advance of Globalization (X1) variable construct of (original sample) 0.922. This means

- Y3 = Seasonal Income & lack of fund supply
- Y4 = Low Acess on Education & Health
- Y5 = Living On Less Than \$1.25 per Day
- Y6 = Fishery Product from Marine Source
- Y7 = Geographic Constraints
- Z1 = The Stakeholders are Rarely Considered in Planning or decision making process
- Z2 = Create More Employments Opportunities
- Z3 = The Policy & Regulatory Frame Works
- Z4 = Lack of Capacity To Prepare Management Plan

that there is a positive relationship between the variable constructs of the Environment Surrounding Agricultural and Rural Development (X) with the indicator of Rapid Advance of Globalization variable construct with The Environment Surrounding Agricultural and Rural Development variable construct. Value t - Statistics of 40,061 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (40.061> 2). The magnitude of the indicator coefficient for the Climate Change (X2) variable construct is (original sample) 0.856 which means there is a positive relationship between the Environment Surrounding Agricultural And Rural Development (X) variable construct with Climate Change indicator. Value t -Statistics of 19,275 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (19.275> 2).

The magnitude of the indicator coefficient for the Expanding participation of the private sector (X3) variable construct is (original sample) 0.804 which means there is a positive relationship between the Environment Surrounding Agricultural And Rural Development (X) variable construct with the indicator of expanding participation of the private sector. Value t - Statistics of 14,475 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (14.475> 2). The magnitude of the indicator coefficient for the variable construct growing demand for bio fuels (X4) of the original sample 0.837 which means there is a positive relationship between the variable construct Surrounding Agricultural And Rural Development (X). The tstatistic value of 17.712 is significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (17.712> 2). The magnitude of the indicator coefficient for the variable construct Skyrocketing Food Prices (X5) is (original sample) 0.835. That means there is a positive relationship between The Environment Surrounding Agricultural And Rural Development (X) with Skyrocketing Food Prices indicator with a t-Statistic value of 22,192 significant (t table

significance 5% = 2). Since the value of t statistic is smaller than t-table 2 (22.192> 2).

The analysis of the PLS relationship between the variable constructs of Rural poverty (Y) with indicators of limited growth opportunity (Y1), a high environment for households (Y2), Seasonal income and lack of fund supply (Y3), Low access on education and health (Y4), Living on less than UD\$ 1.25 per day (Y5) and fishery product from marine sources (Y6). The magnitude of indicator coefficient for indicators of limited growth opportunity (Y1) is (original sample) 0.921 which means there is a positive relationship between Rural Poverty (Y) with indicator of limited growth opportunity. The tstatistic value of 44.740 is significant (t table significance 5% = 2). Therefore, the statistical t value is less than t-table 2 (44.740> 2). The magnitude of the indicator coefficient for the indicators of A High Environment for Households (Y2) is (original sample) 0.846 which means there is a positive relationship between Rural poverty (Y) with the indicators of a high environment for Households. Value t - Statistics of 14,572 significant (t table significance 5% = 2). Therefore, the value of t statistic is smaller than t-table 2 (14.572> 2). The magnitude of the indicator coefficient for Seasonal Income & lack of fund supply (Y3) indicator is (original sample) 0.766. It shows that there is a positive relationship between Rural Poverty (Y) with seasonal indicator of Income & lack of fund supply. Value t - Statistics of 10,932 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (10.932> 2). The magnitude of the indicator coefficient for low access on education and health (Y4) is (original sample) 0.832 which means there is a positive relationship between Rural Poverty (Y) low access on education & health. Value t - Statistics of 17.476 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (17.476> 2). The magnitude of the indicator coefficient for Living On Less Than USD 1.25 per day (Y5) is the original sample 0.901 which means there is a positive relationship between Rural poverty (Y) with living on less than USD 1.25 per day indicator. Value t - Statistics of 27,618 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (27.618> 2).

The magnitude of indicator coefficient for Fishery Product from Marine Source (Y6) indicator is (original sample) 0.782 which means there is positive relation between Rural poverty (Y) with Fishery Product from Marine Source indicator. Value t - Statistics of 12,593 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (12.593> 2). The magnitude of indicator coefficient for indicator geographic constraints (Y7) is (original sample) 0.880 which means there is positive relation between Rural poverty (Y) with indicator geographic constraints. Value t - Statistics of 25.828 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (25.828> 2). The magnitude of the indicator coefficients for the stakeholders are rarely considered in the planning or decision making process (Z1) of the original sample 0.948 which means there is a positive relationship between Fishery Food Management (Z) variable construct with the stakeholders are rarely considered in planning or decision making process. Value t -Statistics of 40,061 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (40.061> 2). The magnitude of the indicator coefficient to create more employments opportunities (Z2) for the original sample is 0.895 which means there is a positive relationship between Fishery Food Management (Z) with the of create more employments indicators opportunities.Value t - Statistics of 26,656 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (26.656 > 2).

The magnitude of the indicator coefficient for the indicator and regulatory frame works (Z3) of the original sample 0.791 which means there is a positive relationship between Fishery Food Management (Z) variable construct with the policy and regulatory frame works indicator. Value t - Statistics of 12,202 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (12.202> 2).

The amount of indicator coefficient for the indicator of lack of capacity to prepare the management plan (Z4) of the original sample 0.881 which means there is a positive relationship between Fishery Food Management (Z) indicator lack of capacity to prepare management plan Value t - Statistics of 23,599 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (23.599> 2).

Table 3 shows for discriminating validity is to compare the roots of Average Variance Extracted (Root AVE) for each construct with a correlation between constructs with other constructs in the model. The model has sufficient discriminatory validity if the AVE Root for each construct is greater than the correlation between the other constructs. Table 3: The AVE each of Variables Constructed

The composite reliability test is shown in table 4. The values in table 5 reflect the reliability of all indicators in the model. The minimum value of 0.7 is ideally 0.8 or 0.9. The value of composite reliability for X is 0.941 for Y of 0.947 and for Z of 0.932. The path coefficient model analysis is shown in figure 4. In the figure it appears that all the indicator variables are above the value of 0.7. In

table 5 the path of coefficient analysis shows that the magnitude of parameter coefficient for the variable of The Environment Surrounding Agricultural And Rural Development (X) is (original sample) 0,889 which means there is positive influence between The Environment Surrounding Agricultural And Rural Development (X) against Rural poverty (Y).

Table 4: Composite reliability Test	
	Composite Reliability
The Environment Surrounding Agricultural And Rural Development(X)	0.941
RURAL POVERTY(Y)	0.947
Fishery Food Management (Z)	0.932

It can be interpreted that the better the management of the Environment Surrounding Agricultural And Rural Development, the better the rural poverty management and the increasing poverty alleviation. Value t - Statistics of 33.716 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (33.716> 2). The amount of parameter coefficient for Fishery Food Management (Z) variable is (original sample) 0,965 which means there is

positive influence to rural poverty (Y) to Fishery Food Management (Z). It can be interpreted that the better Fishery Food Management the better the eradication of rural poverty. Value t - Statistics of 82.289 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than ttable 2 (82.289> 2). Figure 4 below shows the PLS for coastal Rural development based on Fisheries food management.



Fig 4: PLS for Coastal Rural Development Planning Based on Fisheries Food Management

The results of PLS in figure 4 above shows the magnitude of the parameter coefficient for the variable of The Environment Surrounding Agricultural And Rural Development (X) of the original sample 0.889 which means there is a positive influence between The Environment Surrounding Agricultural And Rural Development (X) against Rural Poverty (Y) or it can be interpreted that the better the Environment Surrounding Agricultural And Rural Development. Value t -Statistics of 33.716 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (33.716> 2). The magnitude of the parameter coefficient for the Environmental Surrounding Agricultural And Rural Development (X) variable is (original sample) 0.857 which means there is a positive influence between The Environment Surrounding Agricultural And Rural Development (X) on Fishery Food Management (Z) or can be interpreted that the better The Environment Surrounding Agricultural And Rural Development, Fishery Food Management will be increasing. Value t - Statistics of 27,662 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (27.662> 2). The amount of parameter coefficient for Fishery Food Management (Z) variable is (original sample) 0,965 which means there is positive influence between Rural poverty (Y) to Fishery Food Management (Z). Value t - Statistics of 82.289 significant (t table significance 5% = 2). Therefore the value of t statistic is smaller than t-table 2 (82.289> 2).

Conclusion using partial least squares provided an effective method for predicting the relationship between variable construct with their parameters, including the relationship among construct variables. PLS in this case shows that construct variables among the environment surrounding agricultural and rural development (X), Rural poverty (Y) and Fishery management (Z) interact very strongly with each other. However, it requires priority handling for which construct variables should be handled first. AHP will provide more detailed answers to the priority handling problem.

Results and discussion of AHP processing

Figure 5 indicated that the priority parameter to handle in term of variable X (the environment surrounding agricultural and rural development) is X3 and X5. However, it requires priority handling for which construct variables should be handled first. AHP will provide more detailed answers to the priority handling problem. Priority variables that need to get the most attention according to figure 5 on the variable The environment surrounding the agricultural and rural development (X) is the parameter of The expanding participation of the private sector (X3) with a value of 0.315. While the next parameter that needs to get attention is Sky rocketing food prices (X5) with a value of 0.280. To handle the X variable the primary and strategic steps are the X3 or the expanding participation of the private sector. The role of the private sector becomes very important to improve the agriculture environment including fisheries and rural development. Economic reforms that help attain growth and economic growth. Therefore, Economic reforms in rural development should encourage public-private partnership. In addition, private role could be reducing inequality and regional disparities. The private would help increase support for the political process to stimulate coastal village development.





Fig 5: The priority of variable The Environment Surrounding Agricultural and Rural Development

[9] indicates that agricultural development is an important political priority for two reasons. First, agriculture (and the service and processing activities surrounding it) is important for increasing rural standards of living. Thus, it is an essential component of any inclusive growth strategy that aims to reduce inequality and regional disparities. Second, growth in agricultural productivity and output is a necessary component of food security strategies. As for the second parameter that needs to get attention is skyrocketing food prices. Food price controls for coastal village development need attention. [10] stated that many development economists and practitioners have taken the view that low prices for agriculture generates a major share of the economic output and is thus a key determinant of household incomes. Furthermore, [11] mentioned that food prices can affect households through three major channels: by affecting the affordability of an important component of the consumption basket; by affecting the returns from farming, insofar as the household is directly engaged in this activity; and by affecting the demand for labour in agriculture and thus the wage income of household members who work for agricultural producers. Over time, food price changes may also be important indirect or secondorder effects.

In Figure 6 the Rural Poverty (Y) variable that needs to be addressed is the Low Access on education and health (Y4) parameter with a value of 0.248. While, the second parameter to note is

> Low access on advance and health Limited growth appartunity A high risk environment for households Living on less than \$ 1.25 per day Geographic constraints



the Limited growth opportunity (Y1) with a value of



Figure 6: The priority of Variable Rural Poverty

Furthermore, [11] states that economic growth, with cases in Colombia, explains 73 percent of the reduction in extreme poverty and 84 percent of the reduction in total poverty. Moreover, price stability, and in particular stable food prices contribute to poverty outcomes. As in the case of poverty reduction, laboratory growth is the main determinant of shared prosperity in recent years in Colombia. Labour income represents at least fifty percent of the population, and up to 70 percent for those in the fourth decile, in the period 2008-2013. This evidence highlights the importance of high growth and low inflation for achieving the welfare. Thus, access to education and health becomes very important and strategic as a requirement to establish human quality that can promote

> Lack of capacity to prepare managements plans The role of the policy and regulatory framework Create more employment opportunities The stakeholders are rarely considered in planning or in decisio 0.029

economic growth and environmental sustainability. Thus, to alleviate poverty in rural areas, an important prerequisite of priority is to provide people with access to education and health. While the second parameter Y1 is a limited growth opportunity. By providing the widest possible opportunity to family farming or in this case the fishermen family is expected to alleviate poverty in the village. [12] states that family farming is very important because: (a). Family farming represents an opportunity to boost local economies; (b). Families farming are especially when combined with specific policies aimed at social protection and the well-being of communities; (c). Largest share of investment in agriculture comes from farmers.



Figure 7: The priority of Variables Fishery Food Management

In Figure 7 Fishery food management (Z) variable that needs to be addressed is Lack of capacity to prepare management plan (Z4) with value 0,657. While the second parameter that needs attention is the parameter of the policy and regulatory frame works (Z3) with a value of 0.232. Z4 parameters need to be handled by providing technical guidance to fishing communities, especially fishermen organizations to increase their capacity as an effort to increase economic growth, strengthen social kinship and keep environment to be sustainable. The focus on this parameter is on the informal aspects of the informal community, supported by the village, district and regency of government. Strengthening community institutions is an important requirement for fishery food management achievement. While the parameter of Z3 is the second concern is the policy and regulatory frame works. Z3 means that in order to estimate

fishery food management a clear policy framework is needed, and it can be used as a guide for governments, communities and the private sector to manage safe and healthy fish based foods.

CONCLUSIONS

Coastal rural development based on fisheries food management encompasses 3 (three) important aspects: encouraging the environment surrounding agricultural and rural development, eradicating rural poverty and fishery food management. The three circuits have a very significant and positive relationship. In particular, there should be priority to address the environment surrounding agriculture and rural development by encouraging the private sector to contribute to boosting the local economy. In addition, food price control needs to get the attention especially from the government. Meanwhile, to alleviate poverty in

the coastal village should be provided in advance of access to education and health. It is an absolute requirement to increase community resources. The second factor that also needs to get attention is to provide an opportunity for the fishermen's family to be more active in the family's economic approach.

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