

Management Restoration Plans for Coastal Villages

Rudianto¹⁾, Edi susilo¹⁾, Supriyatna¹⁾

¹⁾Faculty of Fisheries and Marine Science, Brawijaya University

Email: haji_rudianto@yahoo.com

ABSTRACT

The village is located in the coastal area up to this time has decreased the quality of the coastal environment either caused by the process of natural or anthropogenic processes. Coastal damage Persistent will affect people's lives. Based on studies conducted by Rudianto (2013) and continued research by Rudianto (2014) on the institutional model for implementing the strategy, the resulting output coast of research called restoration plan for coastal villages or R2DP coastal villages. The objective of R2DP is helping the village administration to alleviate the problems of coastal areas. R2DP is a guideline that will be used by the village government based on a legal framework called the village regulations. The method used to compile R2DP is descriptive method. By using the method of Miles and Huberman (1984) used data reduction techniques. This technique is to pick and choose which data is critical to focus on the purpose of research. The results of research to produce findings about the restoration plan or a coastal village called R2DP. The essence of the mechanism and procedure R2DP is doing the restoration work by using institutions as a means of restoration.

Keywords: Coastal damage, Restoration plans for coastal villages, Village regulation

INTRODUCTION

The coastal area is an area that stores high biological resources, as well as an artificial ecosystem that provides a wide range of environmental services, such as the

port area, transportation, industrial zones, tourism and leisure district, settlement, ponds and waste dumps (Dahuri et al., 1996). Potential and advantages of coastal and marine resources Indonesia can be described as follows: that the inland waters, the archipelago waters, territorial sea and has a length of 12 miles. Exclusive Economic Zone has a length of 200 miles from the baselines. The potential of biological resources with a high level of biodiversity that has a high economic value as well, such as: the potential for large pelagic fish amounted to 1.16 million tons, small pelagic amounted to 3.6 million tonnes, 1.36 million tonnes of demersal fish, shrimp penaid 0.094 million tones, 0.004 million tons of lobster, squid 0.028 million tons, and reef fish consumption of 0.14 million tons. The catch is obtained as much as 5.12 million tons per year, or approximately 80% of the sustainable potential (Richardson, 2008 in Dahuri, 2010). Another potential includes: the potential marine aquaculture, brackish aquaculture potential. The potential of coastal and marine areas will encourage the economic growth rate is high both local and regional economies. In order to preserve the potential of fisheries, coastal regions have a strategic role. This is because the coastal area is the process of spawning ground, nursery ground area and feeding area ground. If the conditions of both the area of coastal fishery potential can be assured of sustainability. However, if the damaged coastal areas, it will threaten the existence of fishery potential. Ironically coastal is currently experiencing degradation of almost 75% in all coastal areas

in Indonesia. Rudianto (2013) has developed a strategy of integrated management of the coastal ecosystem restoration to produce research that treating damaged coastal ecosystems should be addressed first mangrove forests, coral reefs, estuaries and sea grass area. Results were then followed by Rudianto (2014) by arranging the institutional model based coastal "good governance" for application management strategy. So that the research can be operational and be used as guidance by the local government, the research was continued to determine the extent to which the models that have been developed can be used by the Government of Gresik and Malang Regency. Therefore, it was necessary to dialogue in group discussion forum especially with the stakeholders.

Based on this conceptual background above, the objective of this study is focussing on the government's institutional villages lying coastal region as the spearhead of an integrated management of coastal ecosystems. An institution is a complex of rules and the role of social roles. Thus, the institution has a cultural and structural aspects regarding in terms of the structural form of various social roles (Tony et al, 2004). This is in line with the opinion of Syahyuti (2003) that the institution contains two important aspects, namely "institutional aspects" and "organization aspects". Aspects of institutional includes social behavior, where the core study is about the value, the norm custom, mores, folkways, usage, beliefs, morals, ideas, ideas, doctrines, wants, needs, orientation and others.

Fitriansah (2012) states that the key to successful handling of damage to coastal areas emerging from the consciousness inherent in society. This indicates that environmental management is done by the community more effective and sustainable. There are three actors who played the role to

perfection namely: the local government as an adviser and director of the program, then, the local community as the main executor of all activities, as well as development of fishermen or called "Bina Nelayan" group that facilitates relations between the two actors is based on the principles of transparency and openness. The success of restoration of coastal villages which is based on the results of the study are determined by several things, namely: first, the lack of clear information from the government about what will be done to overcome the damage to the ecosystem of coastal villages. The government's role is particularly important to allocate funds for coastal restoration program. Second, public participation and private sector are as actors to participate with the government to fix the damage to the coast. This participation should be driven by the government in real terms, and do not mean just for the sake of politics. The government must be able to submit a public participation to the community itself with the selection of those who were entitled to be nominated as the officials and members who represent the community, including the private sector. Society and the private sector raised the motivation and awareness to participate actively coastal restoration by the government, especially the village government. Therefore, it needs to be an analysis of the village government is spearheading deal damage coastal areas. In addition, the shape and mechanism R2DP will be given a more comprehensive manner to facilitate the restoration of coastal ecosystems.

MATERIALS AND METHODS

The method will be used to achieve the research objectives using descriptive method with qualitative approach. The focuses of the research problems are (1) the development

of the institutional capacity of coastal villages in the district of Malang and Gresik that includes a) the organizational structure, b) the mechanism of action, c) culture of the organization, d) the budget system/value, e) facilities and infrastructure, and (2) factors to be supporting and institutional capacity development of coastal villages. Data to be collected includes primary and secondary data. Primary data will collect on interviews, observation and documentation. Analysis of data is using interactive models of analysis developed by Miles and Hubberman (Sugiyono, 2008) through three stages namely data reduction, data presentation, and verification.

The data collected in the field will be described in further detail. The gathered data is then selected and screened adjusted to focus the research. The data has been collected, and then do the editing, coding and tabulation. Continuous process of data reduction is done for ease of use and simplified. Data that has been reduced, then presented to be organized to get the picture clearly and lead to a focus of study. Data will

be analyzed and searched the relationship and its meaning and set forth in the form of tentative conclusions.

Existing condition in the coastal area before R2DP program is implemented that it must first be inventoried exploration problems that occur in coastal areas. Therefore, issues, challenges, obstacles and opportunities in coastal areas need to be analyzed in a more comprehensive and focused manner. The table below can be used as a guideline for human exploration activities in coastal areas. What kinds of activities do exist on the coastal areas. It is recommended to use a map with scale 1: 10.000 to delineate the location of each land use in coastal areas. The problems common faced are to find out the base map for land use mapping. Therefore, it needs search a map from goggle earth. Table 1 below the issues, threats and obstacles in coastal. To be able to compile R2DP, it was first drawn up issues, threats and obstacles often encountered the coastal region can be seen in table 1.

Table 1: Issues, Threats, and Obstacles Related with Opportunity to Coastal Village Development.

Exploration activities	Issues, Threats, Obstacles
Opportunity for development in coastal areas	Development issues, threats and constraints related to the issues of settlement construction, industrial, marine tourism area
Oil and gas productions	Seafood sustainability of resources and coastal pollution, water and air, as well as the loss of coastal habitats of aquatic invasive species contaminated with heavy metals
Mineral retrieval coast	Loss of habitat caused by excavation, silting, construction of industrial mining sites, coastal erosion as a result of beach sand mining
Urban development (human settlements), Industry and Ports	Massive urban development causing loss of habitat due to construction activity, including the occurrence of siltation, dumping of industrial waste in coastal and marine areas. As a result, a lot of death of marine life and high pollution. Coastal erosion, abrasion and rising sea levels due to climate change will cause coastal areas to get extreme waves.

Exploration activities	Issues, Threats, Obstacles
Tourism growth	Urban development resulting in loss of habitat, increased pollution, especially from liquid waste, the increased erosion, decrease the beach, the increase in extreme waves. The impact is the occurrence of heavy metal pollution, coral bleaching, the loss of endangered species, fish catches decline in production.
Growth and sustainability of marine fisheries	Overharvesting and the use of destructive methods of by-catch and endangered species. It is necessary for the regulation and enforcement of illegal fishing, protection of nursery areas, and prevention of land-sourced pollution from coastal waters, reducing the discharge of freshwater from the river (shrimp fisheries)
The growth of coastal aquaculture	Drainage of wetlands and reclamation for agriculture and urban growth reduced. Habitat and biodiversity loss, particularly from pond construction. Lack of fresh water input to municipal, industrial and agricultural pollution; pollution due to farming activities. Institutional constraints. Coastal erosion; Sea level rise.
The sustainability of agriculture in the coastal	Habitat and biodiversity loss. The deposition of the coast due to increased surface water (run off). The decline in freshwater discharge of the flow of irrigation water. Reduction of flooding and sedimentation due to construction of dams. Salting ground water due to sea water intrusion. Monitoring the use of fertilizers and pesticides. The impact of urban development. Monitoring the occurrence of erosion and sea level rise.

As a guideline to determine the priority areas to be addressed in restoration, then made a few guidelines that can be used as a reference before R2DP prepared. Therefore, table below is shown as follows:

Table 2: Identification Priority Areas and Ways

Priority Areas	Ways
Regulations and practices Fisheries	Law, licensing, supervision, health and safety, education and training.
Conservation of coastal and marine (including MPA-Marine Protected areas and wetlands) program and public awareness	Management, and the benefits to society.
Integrated Coastal Zone Management	Establish and improve the planning and management of institutions (particularly urban, industrial and tourism-related).
Control of effluent and pollution control	Improving local sewage services, sewage systems, industrial and agricultural waste control; international action on marine waste, litter and illegal dumping; management of oil spills; protection against invasive species.
Coastal Protections	Vulnerability assessment, adaptive planning of land use, the maintenance of the coastline; scheme 'Blue Flag' participatory
Cooperation between sectors	Consultation and engagement between stakeholders, locally, at the catchment scale, national and international

Priority Areas	Ways
Information System, Monitoring, R&D	Checking the field and remote sensing techniques, standards for monitoring, establish performance indicators, improving the evidence base including public reporting, financing
Operational Capacity and Human Resources Development Capacity	Develop professional resources, technical and managerial; equipment and physical infrastructure investment and maintenance

The location of this research is in the village of Tambakrejo, and Gajahrejo village in Malang regency and Tanjung Widoro and Banyu Urip village in Gresik regency. The basis of selecting the two regencies were selected with consideration: (a) the level of damage to ecosystems is particularly serious in both regencies with an estimated economic growth rate is very high, but very poor ecological conditions and the level of degradation that occurs quite severe; (b) Each local district has excellent potential as beaches with the Blue Spring Baby Tuna and Tuna and skipjack in Malang regency, while the potential winning in Gresik regency is green mussel (*perna viridis*). Nevertheless, both districts have limitations in the development of quality products including in marketing; (c) Both regencies have an important position in the development context of East Java province.

The methods used to develop strategies for R2DP is using interpretative structural modelling (ISM). ISM will consider the main purpose of R2DP and then it will arrange strategies based on the priority scale. The purpose of this study is to formulate six resulting from research of Rudianto (2013). The strategy includes (a) Improving management of the restoration of mangroves, coral reefs, estuaries and sea grass beds; (b) Increasing resilience of coastal areas against the threat of natural disasters and conflict mitigation in coastal areas; (c) Preserving gradually coastal ecosystems and

sustainable community-based; (d) Increasing sources of funding from both governmental and non-governmental as well; (e) Improving the institutional capacity of both formal and non-formal as well as improving the quality of human resources; (f). Improving the competitiveness of coastal areas to increase the value-added products to facilitate increased production of fisheries and marine sector.

Based on the analysis of Analytical Hierarchy Process (AHP), the key actors to conduct coastal restoration is the village government. This is because the village government is directly adjacent to the village community. If the central government gives authority to the provincial government through the forestry service and rise to marine and fisheries department, the coastal restoration program will not run properly. The village government is a government agency that is closest to the people. It means that the spearhead of local government services. Besides, there are three agencies that have the greatest weight in addition to the village government. They are the Government of Gresik and Malang regency government, followed by the District government, and the office of the environment. To implement 6 (six) factors as proposed by Rudianto (2013), the main focus is to enhance the role of the village government. Increasing the role of the village government is to improve the institutional capacity of the public institution supported by the form of community watch

groups (Pokmaswas). For the orientation of the role and responsibilities of the village with Pokmaswas government is implementing a restoration program based green economy, poverty eradication, sustainable development, carbon emissions reduction and response to natural disaster preparedness.

RESULTS AND DISCUSSION

The survey was conducted in this study wanted to dig deeper into how the perception of the public and the government about the planned restoration of coastal villages. Besides, the bureaucracy to plan coastal village restoration program medium term associated with the process and mechanism of how to construct village regulations. Characteristics of those surveyed will provide information about the organizational strategy drawn up at the village.

Respondents came from two districts, namely districts Ujungpangkah Gresik and District Sumbermanjing wetan, Malang. The average of the two districts society between the ages of 41 years to 45 years of

age was 33.3%, and respondent age 46 to 50 years was 33.3% and the respondent was 50 years old 26.7%. Respondents from the community is representative of the isherman figure, chairman of the non-governmental organizations or the so-called public watchdog group (Pokmaswas), a youth leader, chairman of the institute village representatives, representatives of community-level pillars of residents and neighborhoods. Education by 40% of respondents graduated from high school and junior high school graduates was 13.3%, the number of primary school graduates by 6.7% and the public can not be found respondents were illiterate. People who work as fishermen amounted to 33.3%, worked as the village was 33.3%, private work profession by 6.7%, works as a selfemployed amounted to 6.7%. Public income by an average of 1,500,000 IDR 2,000,000 IDR per month by 40%, then the income 1,000,000-1,500,000 IDR 26.7% and incomes averaging below 1 million IDR of 20%.

Table 3. Characteristics Respondents both in Gresik and Malang Regency

No	Perception of Community	Perception of Government
1	Related to the first objective to improve the management of mangrove ecosystems, coral reefs, estuaries and seagrass beds, 73.3% of people believe that the damage to ecosystems caused by human activity, especially the land conversion. 46.7% of people agree needs to be done restoration program and they think that it should be done by the village government through the preparation of a master plan. Besides, 60% of people expect, they are included in the process of restoration of coastal management.	Related to the first objective to improve the management of mangrove ecosystems, coral reefs, estuaries and seagrass beds, 42.1% of village government believe that the damage to ecosystems caused by human activity, especially the land conversion. 52.6%, the village government agree to restore coastal ecosystem. Therefore, the village government hope to prepare masterplan and to allocate in village fund. 100 % of the village government agree to invite people participation in coastal restoration and they need provincial government encourage local people participation.
2.	Related to the second objective to increase resilience of coastal area toward natural disasters and to reduce social conflict. 60% of people agree that government should build a forum as bridge between community and government. Membership	Related to the second objective to increase resilience of coastal area toward natural disasters and to reduce social conflict, 78.9% of the village governments agree to build a forum consisted of reprehensive of local people, private sector and

No	Perception of Community	Perception of Government
	of forum is consisted of represent from community, private and government.	the village government.
3.	Related to the third objective to preserve coastal ecosystems gradually and sustainable based on the community, 66.7% of community agree to work together with government to plant mangrove. 66.7% people agreed to have the awareness to preserve coastal ecosystems with the government, but they do not know how to do coastal restoration. In addition, 60% of people do not agree, if the government makes the reclamation program for use as a residential area or industry. 67.7% of the public believes the government needs to establish conservation areas to prevent damage to mangrove forests.	Related to the third objective to preserve coastal ecosystems gradually and sustainable based on the community, 78.9% of the village government agree to work together with community because of government limitation. The problems faced that the village government do not have guidance to do restoration. 73.7% of the village government agree that they are still need supporting finance from provincial and regency government.
4.	Associated with the fourth goal to increase financing resources both from government resources or non-government, 40% of people believe that the allocation of village funds can not be used for restoration efforts, but the provincial government and local governments should be able to disburse funds for restoration. 53.3% of people agree to conduct mutual cooperation for coastal restoration. So far 33.3% of the public agree that the village government has never present a program to prevent erosion and sedimentation.	Associated with the fourth goal to increase financing resources both from government resources or non-government. the village government agree to finance coastal restoration use allocated village fund. Beside, the village government hope that private sectors are also allocate Corporate Social Responsibility (CSR) for coastal restoration.
5	Associated with his fifth goal of which is to increase the quality of human resources both at the institutional capacity of formal and non-formal, 83.3% of people agree, especially to provide clarity on the task of handling the public representative institutions, private sector and government.	Associated with his fifth goal of which is to increase the quality of human resources both at the institutional capacity of formal and non-formal, 89.3% of the village government agree that the forum build by the head of village will help overcome the degraded coastal ecosystems. The 93% of village government agrees to create transparancies to their people related the restoration program not only in the scope of substance of restoration, but in the scope of using money.
6.	Associated with the sixth goal to improve the competitiveness of coastal areas to increase the added value, 100% of people agree when implementing the restoration program noticed an increase in employment programs, including community can increase production, productivity, inno- vation and creativity area.	Associated with the sixth goal to improve the competitiveness of coastal areas separately to increase the added value, 84.2% of the village government agree to increase job opportunity for local people including increasing income.

Based on the results of questionnaires from Table 3 above, the institutional model is based on the principle that: (a) The orientation of the institutional model approach oriented to the restoration of the

coastal village six goals, which is the result of interpretative structural modeling. (Rudianto, 2013); (b) To get a description of the village area is more complete, the necessary supporting data are based

monograph village profile data and plan rural development strategies; (c) To give authority to the village, the county government gave a letter of assignment to the subdistrict heads to instruct the head of the village create a forum that consists of three stakeholders consisting of representatives of local communities, the private sector and government representatives. Institutional model is using co-management approach. According to Wells, *et. al.* (1992) that all stakeholders were given the opportunity to be actively involved in the management of mangrove forest destruction. This is intended to ensure that the commitment and participation and to accommodate knowledge.

Forum formed to be planned infrastructure in the form of human resources, infrastructure, funding, and support standard operating procedure of the regency government. Forum should

implement restoration programs coastal villages and the program is oriented towards poverty alleviation, capacity building, sustainable development, reducing carbon emission and natural disaster preparedness. Institutional model for village restoration can be shown on figure 1.

To complete the institutional model of the village government, it needed concept of local regulations proposed to the regents for approval which will be determined by the legislature and the executive. The approval includes the substance of how to regulate: a) the preservation of coastal ecosystems gradual and sustainable community-based; b) increase the sources of financing that comes from both the government and non-government; c) enhance the institutional capacity of both formal and non-formal as well as improving the quality of human resources; d) improving the management of mangrove ecosystems, coral reefs, estuaries

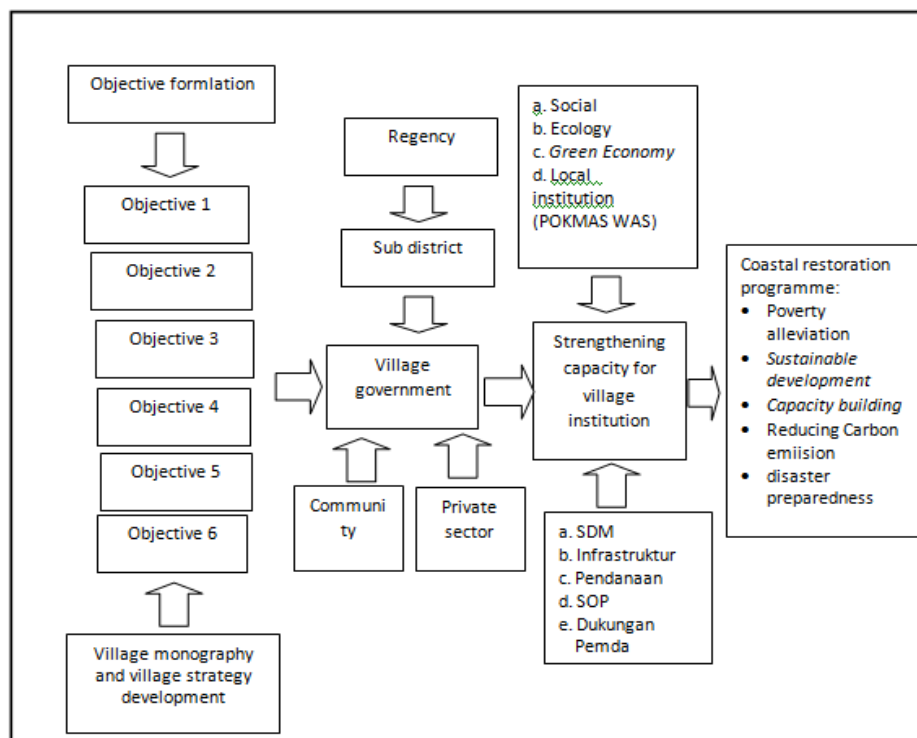


Figure 1 Institutional Model for Village Restoration

as well as sea grass beds; e) enhance the resilience of coastal areas against the threat of natural disasters and conflict mitigation in coastal areas; f) improve the competitiveness of coastal areas to increase the added value of products to facilitate fishery products. Therefore, the substantive details of the regulations concerning the overall objectives of the program is number of six to complete a short-term coastal damage and problems of medium-term and long-term. Therefore, to establish the basic framework of the development of integrated coastal restoration must have the insight of justice, resilient and highly competitive.

To complete the institutional model above, village heads need to develop village regulations. It required the approval of the head of the Village Consultative Body to be discussed at the village level leaders. After approval of the Village Consultative Body, the village head then insert restoration to coastal villages to the medium-term plan of the village. With the enactment of the coastal village restoration plan as part of government policy the village, the village head can conduct restoration activities on the basis of coastal villages to regulations that have been set.

Coastal village restoration plan needs to be integrated into the medium-term rural development plan of the village. The integration should be in conformity with the regulation number 114/2014 ministry

of interior. Things that are needed in the integration include: (a) Coastal village restoration plan should be in line with the medium-term development plan of the district; (b) Develop and sorting data about programs and activities that will support the development of the restoration of coastal villages; (c) Grouping restoration programs and activities coastal villages into the field of administration of the village; (d) Format adjustment plan data restoration program with the data format of the village.

Once the integration is complete, the restoration plan followed by the drafting of integrated rural village regulations. Based on the ministry of the interior regulation number 111/2014 regarding the technical guidelines for the village regulation pursuant to paragraph 1 of Article 6 that the regulation of the village must be initiated by the village government. Public hearings should be done so that people can know what will be done collaboration between the government, the public and private sectors. After the completion of public hearings, the head of the Village Consultative Body invited the head of the village to discuss draft regulations coastal village restoration plan. The results of the meeting will be announced to the public.

Based on village regulations on coastal village restoration plan, the structured matrix program for 5 years can be prepared by guidance on table 4.

Table 4: Matrix Program for Coastal Village Restoration Plan

No	Objectives	Year				
		2017	2018	2019	2020	2021
1	Preservation of coastal ecosystems gradual and sustainable community	a. The preparation stage team formation b. The establishment of a restoration	a. Training program b. Discussion draft of coastal restoration	a. Implementation of the restoration of coastal villages b. Identification	a. Implementation of the restoration of coastal villages b. Identification	a. Take monitoring and evaluating b. Feedback recommendation

No	Objectives	Year				
		2017	2018	2019	2020	2021
	based Program:	site c. Preparation of data base d. Analysis of existing condition e. Preparing the masterplan	c. Adoption of the draft restoration of coastal villages d. Adoption of the draft restoration of coastal villages	of objectives, restoration target and approach c. Assessment of vulnerability d. Monitoring, review and revision	of objectives, restoration target and approach c. Assessment of vulnerability d. Monitoring, review and revision	
2	Increased sources of funding both from government and non-government	Preparing and implementing annual budget in village allocation fund Explore other funding sources	a. Preparing and implementing annual budget in village allocation fund b. Explore other funding sources	a. Preparing and implementing annual budget in village allocation fund b. Explore other funding sources	a. Preparing and implementing annual budget in village allocation fund b. Explore other funding sources	a. Preparing and implementing annual budget in village allocation fund b. Explore other funding sources
3	Improving the institutional capacity of both formal and non-formal as well as improving human resources	a. Determination and institutional design approach b. Election of representatives in the forum c. Determination restoration forum coastal village with village heads decree d. Preparation of work programs forum e. Determination escort team to the village head f. Implement restoration forum	a. Reparation of human resources development program b. Business opportunities c. Improved management of resources and improvement of the environment d. Improving coordination among forum e. Planning of infrastructure necessary	a. Establish a work program b. Business coaching c. Human development d. Environmental development	a. Establish a work program b. Business coaching c. Human development d. Environmental development	a. Establish a work program b. Business coaching c. Human development d. Environmental development
4	Improving the management of mangrove ecosystems coral reefs, estuaries and sea grass	a. Efforts to increase community awareness b. Efforts to increase participation community	a. Efforts to increase community awareness b. Efforts to increase participation community	a. Efforts to increase community awareness b. Efforts to increase participation community	a. Efforts to increase community awareness b. Efforts to increase participation community	a. Efforts to increase community awareness b. Efforts to increase participation community

No	Objectives	Year				
		2017	2018	2019	2020	2021
		c. Skills for rehabilitation d. Prevention of illegal logging, e. The prevention of the destruction of coral reefs	c. Skills for rehabilitation d. Prevention of illegal logging, e. The prevention of the destruction of coral reefs	c. Skills for rehabilitation d. Prevention of illegal logging, e. The prevention of the destruction of coral reefs	c. Skills for rehabilitation d. Prevention of illegal logging, e. The prevention of the destruction of coral reefs	c. Skills for rehabilitation d. Prevention of illegal logging, e. The prevention of the destruction of coral reefs
5	Increasing the resilience of coastal areas against the threat of natural disasters and conflict mitigation coastal region	a. Hazard assessment b. Early warning system c. Preparation is a key element models mitigation	a. Hazard assessment b. Early warning system c. Preparation is a key element models mitigation	a. Hazard assessment b. Early warning system c. Preparation is a key element models mitigation	a. Hazard assessment b. Early warning system c. Preparation is a key element models mitigation	a. Hazard assessment b. Early warning system c. Preparation is a key element models mitigation
6	Improving the competitiveness of coastal areas to increase the added value of fishery products	a. Retrofitting of Small Medium Businesses b. Job Creation c. Zero Waste Program to The Blue Economy d. Encourage Innovation and Creativity	a. Retrofitting of small medium businesses b. Job creation c. Zero waste program to the blue economy d. Encourage innovation and creativity	a. Retrofitting of small medium businesses b. Job creation c. Zero waste program to the blue economy d. Encourage innovation and creativity	a. Retrofitting of small medium businesses b. Job creation c. Zero waste program to the blue economy d. Encourage innovation and creativity	a. Retrofitting of small medium businesses b. Job creation c. Zero waste program to the blue economy d. Encourage innovation and creativity

Based on the above matrix program, then the task of the forum has been formed by the head of the village are working in accordance with the work program that has been agreed. Before the election of representatives of members of the forum, the head of the village began to approach to the people so they can choose a representative member in accordance with the public conscience.

CONCLUSION

Institutional model for the implementation of the restoration plan in accordance with the coastal villages of rural

communities is a forum which is at the village. The forum consists of representatives of the people elected, representatives of private sector and government representatives appointed by the village headman. Forum works in accordance with the six goals have been determined based on the results of research Rudianto (2014) and the objectives are translated into programs. Coastal village restoration plan is to be implemented in a gradual and sustained. Thus, the cooperation between the village government and village consultative bodies should reach an agreement. The deal has

been achieved in the form of a decree outlined the village head. After the forum is legal, then draw up a matrix program with duration of five years. The program became the basis matrix operation forum coastal villages to realize the restoration plan.

ACKNOWLEDGMENTS

The corresponding author are gratefully to thank dean of fisheries and marine science, Brawijaya University to give me opportunity for in depth study for coastal restoration. I also would like to thank Prof. Dr. Ir. Woro Busono, MS whose give me opportunity to conduct this research.

REFERENCES

- Dahuri R., (2010). Positioning Perguruan Tinggi dalam Pembangunan Kelautan Nasional. Bahan Kuliah Umum di Fakultas Perikanan dan Ilmu Kelautan UNSRAT Manado. 206 p.
- Dahuri, R., J. Rais, S.P. Ginting, dan M.J. Sitepu, (1996). Pengelolaan Sumber - Daya Wilayah Pesisir dan Lautan Secara Terpadu, Pradnya Paramita, Jakarta.
- Fitriansah, Herry, (2012). Keberlanjutan Pengelolaan Lingkungan Pesisir Melalui Pemberdayaan masyarakat Di Desa Kwala Lama, Kabupaten Serdang Begadai. Jurnal Pembangunan Wilayah & Kota. Biro Penerbit Planologi Undip, Volume 8 (4) 360-370, Desember, 2012.
- Miles, Mathew B. and Michael Huberman, (1984). *Qualitative Data Analysis. A Sourcebook of New Methods*. London. Sage Publications, Inc.
- Rudianto, Ismadi, Ade Yamindago, (2013). *Strategi Pengelolaan Restorasi Ekosistem Terpadu Menunjang MP3EI: Studi Kasus Kawasan Pesisir, Kabupaten Malang dan Kabupaten Gresik, Propinsi Jawa Timur*. Universitas Brawijaya. Belum diterbitkan.
- Rudianto, (2014). Analisis Restorasi Ekosistem Wilayah Pesisir Terpadu Berbasis Co-Management: Studi Kasus di Kecamatan Ujung Pangkah Dan Kecamatan Bungah, Kabupaten Gresik. Research Journal of Life Science. <http://rjls.ub.ac.id>.
- Sugiyono, (2008). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. Bandung Alfabeta.
- Syahyuti, (2003). *Bedah Konsep Kelembagaan: Strategi Pengembangan dan Penerapan dalam Penelitian Pertanian*. Puslitbang Sosek Pertanian. Balitbangtan Bogor. 123 hlm
- Tony N.F. dan Utomo B.S., (2004). *Pengembangan Kelembagaan dan Modal Sosial*. Modul Kulia Magister Profesional Pengembangan Masyarakat Departemen Ilimu-ilmu Sosial Ekonomi Fakultas Pertanian Institut Pertanian Bogor.
- Wells, M. and Brandon, K., (1992). *People and Parks. Linking Protected Area Management with Local Communities*. World Bank, WWF-US and US-AID, Washington.