

## **CHAPTER III**

### **RESULT AND DISCUSSION**

#### **3.1 Social Impact of Iron Sand Mining in South Coast Cikalong Sub-District, Tasikmalaya Regency**

##### **3.1.1 Social Life Changes**

Societies with maritime life patterns usually live in the coastal areas, one of them is people in the coastal district of Tasikmalaya, West Java. The beaches include Sindangkerta Beach, Pamayangsari Beach, and Karangtawulan Beach. Most of the coastal communities are livelihood as fishermen who utilize water resources as a place to earn a living and also a tourist destination. The seafood obtained can be consumed by themselves and some are sold. For example, in Pamayangsari Beach, Pamayangsari Beach became the center of fishing activities of fishermen in South Coast Tasikmalaya.

The results of my observations, there's no specific social changes in societies of Cikalong Sub-district after the activity of iron sand mining. People who work as miners don't feel any prominent social change. Sand mining creates jobs for people in Cikalong Sub-district. However, miners are not the only people from Cikalong Sub-district. Approximately 40% of mine workers come from outside Cikalong Sub-district such as the society from Karangnunggal and Cipatujah Sub-districts. Some people

from outside of Cikalong Sub-district have chosen to settle and some are choosing to commute from their homes. Although the miners in the field are dominated by residents of Cikalong Sub-district, there is no discrimination or different social treatment between them.

People who take advantage of marine and river areas can not be separated from the social and cultural life contained in the community itself. One of the maritime traditions that are still run in fishing communities is Fisherman Party Activities such as the *Upacara Hajat Laut*. *Upacara Hajat Laut* is usually held every year as an expression of gratitude thanks to the sea or in this case the belief in the Queen of the South Coast for the delights of sea products are late delegated. *Upacara Hajat Laut* is usually packaged in such a way with folk art performances, bazaars, races to make equipment go to sea (weaving nets, weights) and often accompanied by tabligh akbar. Before and after the existing of iron sand mining activity, the society still run this tradition because its their culture.

In general, the people of Cikalong Sub-district, Cipatujah Sub-district and Karangnunggal Sub-district have the same culture because the area of the Sub-districts is close enough. In terms of religiosity, the inhabitants are Muslim. When the time has shown for praying, they always praying together alternately, either indigenous or immigrant societies. They understand each other and respect each other.

As in most rural communities, people in the villages of Cikalong Sub-district live together and work together. There is no social change that occurs in the community after the sand mining activity in the villages. Indigenous people of Cikalong and immigrant residents mingle each other and help each other out. The most prominent thing in this social impact is between the pros and cons of the sand mining activities. Actually, the societies who working as miners declared to disagree if the sand mining is continued. However, economic conditions put pressure on the people to keep taking the job.

Before the existing of iron sand mining activity, some society work as a farmer or traders. There's some of society that still need a job to fulfil their needs besides working as a farmer and a trader. They decided to taking a job as a miner to increasase daily revenue. The lack of job space causing the unemployment people depend on sand mining in Cikalong Sub-district. However, this social condition doesn't reduce the harmony between communities with one another. They continue to help each other and support the decisions taken by the community itself.

This is proved from the recognition of the society itself. Societies who contra against the mining of iron sand is still appreciate the pro mining workers which is majority pro against iron sand mining. They still greet each other and help each other. The Society around iron sand mining is hoping that the company do a gradual reclamation on the

surrounding environment. Because the guarantee of reclamation is mandatory for legal miners, for example rice fields. This reclamation process may be one of conflict resolution that occurs in social impacts in the society. The real conflict that occurs in the society is the environment circumstances which experienced over exploitation rather than internal conflicts between the community itself. Therefore, the company should provide guarantee of reclamation to the society.

### 3.1.2 The Respond of Societies Around the Mining Area

The community's response to iron sand mining is that people stop mining iron sand which is usually their job. They realize that such activities can harm their environment. Based on Law Number 32 Year 2009 article 5 on the purpose of environmental protection and management that is to ensure the safety, health and human life, it seems no longer valid in South Tasikmalaya Beach. Because since the existence of iron sand mining, the community is not getting protection, even the opposite to cause conflicts, such as horizontal conflicts between citizens. Regional income is not proportional to the natural damage. The right of citizens to obtain a good environment and enjoy public open spaces such as beaches hindered by mining activities.

According to my observasion result, the companies that come to open sand mining get various responses from the societies. There are societies

who support and reject these activities. Societies who rejected the presence of companies around their villages because most of the company's locations are damaging their area. While Societies who support the mining activities because they feel benefited with the opening of new jobs for them.

The support form of the pro-societies towards iron sand mining is the continuing operation of the iron sand mining, even they don't take a strike action. They keep working every day as miners. The rejection form of a contra societies against iron sand mining is by pressuring the company to immediately conduct gradual reclamation of the mine. The society who rejected didn't press the supportive society against the sand mining because they understand each other. Especially for the mining workers which is with the majority of them are support the iron sand mining activity, they keep working as a miner do to meet the economic needs of their families. The society who rejected are pressured the company by negotiation and didn't doing any sort of rally (demo).

Most of societies assume that the company is blocking their access to their economic resources. The reason society denies the presence of this company because in peroses taking iron sand and separating with the ground does look simple but not comparable with the damage. This activity has adverse effects both in the form of natural and socio-economic damage. In addition, the societies don't like the way companies

work because they are not considered the impact of damage or externalities. Can be ascertained if iron sand mining activities continue especially in large quantities (Tens of thousands of tons), then that happens not only environmental damage, but there is a widespread domino effect on the socio-economic life of the community. According to *sindonews.com* In just five years from 2007 to 2011, the ecological damage caused by iron sand mining is estimated to reach Rp35.74 billion or with a total production of approximately 1.35 million tons of iron sand.

Some of societies who understand about the meaning of the environment feel disappointed and saddened by the sand mining in their village. They imagined that their village would be what it would be like if the sand mining activities expanded. They are also worried about the fate of their children and grandchildren in the future when all the land becomes sand because it is clearly an unproductive land when their livelihood is farmers, but they can not do anything because the land sold / rent is private property.

However, some of societies may accept the presence of companies around them because they benefit from opening up new jobs for them. But the number of societies who agree is not comparable with those who reject the presence of this company. For groups that support the company, they are workers who depend on their livelihoods only on iron sand mines, so if they stop it will be difficult to get a job instead.

Factors causing sand mining activities that come from within the community, one of them is due to economic factors. People who used to rely on revenue only from the sale of stalls on the coast, now some people try to work outside the trade sector. One of them became a labor in sand mining. Based on interviews with some miners, they say that being a laborer or a worker in sand mining is more profitable than being a farm worker.

Community education factors are also influential. Most of the people in Cikalong villages are elementary school graduates or didn't graduate from elementary school so their understanding of the environment is minimal. All they have in mind is how to meet their daily needs by earning money through work that can be expected to be a real outcome. They don't think about the sustainability of their efforts in the long term. There are some of the workers who understand about the environment but because of economic pressure they are forced to make the decision to work in sand mining for not getting another job. Some workers do not even know about the environment, which is in their minds only ways to earn money in order to live a decent life.

## **3.2 Economic Impact of Iron Sand Mining in South Coast Cikalong Sub-District,**

### **Tasikmalaya Regency**

#### 3.2.1 The Employment

Unemployment rate in Tasikmalaya Regency is high. BPS (Central Bureau of Statistics) Tasikmalaya regency noted that in 2015 there were 67,375 unemployed. That number consists of unemployed who had worked as many as 29,429 people and unemployed unemployed 37,946 inhabitants. The number of unemployed in an area is considered to be bad for the environment. the number of unemployed are feared will increase the crime rate. Because unemployment also has basic needs that must be met, especially an unemployed have children and wife would need income to meet the needs of everyday life. It is feared to commit criminal acts to earn money in order to meet the needs.

In addition, another impact of the number of unemployed is lowering economic activity. Unemployment causes a decline in people's purchasing power. Declining purchasing power causes a decline in demand for goods and services. This resulted in the entrepreneurs and investors are not enthusiastic about expanding and establishing new industries so that economic activity is down. Unemployment can also lead to a Declining Level of Student Education. In addition to being street children, children



are also not able to get a high education and even not get education at all which of course can reduce the level of education of students.

According to my observation result, iron sand mining is one of the solutions to reduce the number of unemployed people because some people work to become laborers in sand mining, be a supervisor / miner / food seller. Most of the unemployment that is reduced due to the workforce in sand mining is male labor. The existence of sand mining activities has created considerable employment opportunities for some communities in villages close to sand mining sites. Income from iron sand mining is not much as other jobs can produce, but the income is enough for people who have problems of economic shortage. At least the income from mine sand is enough to connect their lives in a day. It also makes the peace of mind for some families because by working in sand mining there is income they earn to support their previously unemployed families. Most of the miners are the head of the family, about 21% of the miners who become the backbone of the family of young people who initially do not have a job.

The existence of mining activities also resulted in the transmigration of the population. Transmigration is a step-in government leveling the population of densely populated islands to rare islands and optimizing

existing natural resources. Sand mining in Cikalong sub-district also provides jobs for people not domiciled from Cikalong Sub-district.

### 3.2.2 Increased Societies Income

Before existence of iron sand mining activities, communities around the coast only worked as fishermen and traders. After this mining activity, the people around the coastal area added their jobs as laborers because the income as laborers was considered sufficient enough to supplement their income. The number of societies who work as miners are 1.24% of the total population. This sand mining on the coast of Cikalong Sub-district provides jobs for people around the mining area, especially for people who are experiencing economic difficulties. Residents who reside near the mining area tend to take on the work offered by the company as a miner.

The income of the community increased after working as a miner. Based on interviews, when they become brokers or income traders who obtained uncertain but after becoming a worker in the sand mining income from the sale of sand can be sure every day there will be. So even with the people who used to be farm laborers, their wages are greater by being miners. Sand mining activities significantly increase the income of some communities.

According to my observation result, income from sand mining activities is very large if the environmental losses are ignored / not calculated. Miners in here are landowners / tenants of land as the owner of the sand, supervisors and workers / miners. The selling price of sand per truck is Rp. 160,000, - divided between sand owners, supervisors and workers. Half of the sales price is Rp. 80.000, for sand owner, Rp. 5,000, for supervisors, the rest divided by a number of workers (3-4 persons) collecting and moving sand (usually each worker earns an average of Rp 15,000 / rit). Sales of large stones worth Rp. 120.000/rit divided for sand owner Rp. 40.000, Rp. 5,000 for the supervisor and the remaining Rp. 75.000 for a number of workers. Sales of small stones worth Rp. 75.000 for the supervisor and his workforce. The average revenue of supervisors is Rp. 50.000/day. The average income of miners / laborers is Rp. 30.000 - Rp. 45.000/day.

Before becoming a miner most of them are becoming farm laborers with income Rp. 10.000, - / day, now there is an increase in revenue. Based on interviews almost all miners and supervisors say that they are grateful for sand mining activities because it is very helpful to their family's economy.

The societies that attracts retribution is the Youth Group of that village, because the road which is passed by the truck is belonging to the village. For Youths Group who stop sand trucks coming out of sand

mining sites are paid Rp.2.000 / truck / day. The finances collected from these wages are used primarily for sporting soccer and volleyball. There is no written record of the wages earned. The money that was collected in the afternoon was handed over directly to the treasurer of the Youth Group. The money from trucking is used for activities of Youth Group. The average income generated is Rp. 30.000/ day.

The damage to the environment due to mining activity is not worth with the salary they earn per day. Environmental damage is more dominant than the increase in the economic growth of surrounding communities. However, sand mining is very helpful for people who need fulfillment for daily needs, at least they still can buy the needs to continue their lives in a day.

### 3.2.3 The Development of Economic Structure

According to my observation result, before the existence of iron sand mining, majority of societies working as a trader. There are several stalls around the coast. After the existence of iron sand mining activity, the stalls becoming more than before. Sand mining is not only profitable as the employment and income of the people, but the economic structure also grows. The existence of income from the informal sector, such as the growth of food stalls of 10 pieces and the presence of food vendors a number of 5 people.

### **3.3 Environmental Impact of Iron Sand Mining in South Coast Cikalong Sub-District, Tasikmalaya Regency**

According to Law No. 23/1997 on Environmental Management, the definition of environmental destruction is an action that leads to direct or indirect changes to its physical and / or biological nature which result in the environment not working anymore in support of sustainable development. Here's some of indicators of environmental impact caused by iron sand mining.

#### **3.3.1 Impact on The Mainland**

According to my observation result, sand mining causes damage to ecosystems, such as Mangrove ecosystems and coral reef ecosystems. As a result of sand mining activities, causing damage that occurs, among others, reduced oxygen levels in water due to sedimentation / excessive precipitation, mangrove forest function changes as abrasion retarder and marine biota ecosystem. Damage to coral reef trash can result in, among others, abrasion, decreased water productivity decreasing the attractiveness of marine tourism and decreasing the welfare of fishermen.

Natural phenomena that causing abrasion include tidal sea water, wind above the ocean that produces waves and ocean currents of destructive power. Imbalances of marine ecosystems, for example, occur as a result of massive exploitation of the marine wealth from fish, coral

reefs and so on so that currents and ocean waves massively lead to coastal areas and potentially cause abrasion.

Another factor that marks at once causes ecosystem imbalances is sand mining. Massive coastal sand mining by dredging as much sand as possible and in high intensity can reduce the volume of sand in the oceans and drain it bit by bit. This has a direct effect on the direction and speed of sea water that will directly hit the beach. When it does not 'carry' sand, coastal water will be lighter than usual so it can be harder and faster to hit the beach so that such a process also increases the possibility of abrasion.

The occurrence of abrasion on the coast will result in changes in the landscape due to coastal erosion by continuous sea-wave blows against coastal walls. The result of coastal abrasion is depreciation of the coastal area. The shrinking of the coastal area is the most obvious impact of abrasion. Waves and ocean currents that usually help the way to go and go home fishermen or give scenery and beautiful atmosphere on the beach then be terrible. The harsh impacts on the coastline can thrill rocks and soil so that both will slowly separate from the land area and become part of the flooded water. This is not only detrimental to the tourism sector, but also directly threatens the survival of people living around the coast who own a home or business space.

In addition, another abrasion impact is the loss of seawater gathering places. This is a logical consequence that occurs with the erosion of coastal areas beginning with destructive waves and ocean currents. When they lose their habitat, the beach fish will be confused to find a place to gather because they can not inhabit marine fish habitats because of the threat of predators or unsuitable temperatures and too large waves of sea water. The worst result is the death of the beach fish.

The South Coast of Tasikmalaya Regency, which has a length of 52.5 km, has been damaged by 15 percent of coral reefs. One of its effects with the existence of iron sand exploration will affect the damage to coral reefs where fish live. Mining activities that operate every year for years result in drastic changes in the coastal areas of the mining area. This is very dangerous to citizens, and the flow of water will undergo structural changes, threats to drought and sudden floods due to the uncertain climate, is a major threat to societies.

Impact on other mainland is the increasing of road damage. Company routes in some villages in Kecamatan Cikalong can be passed by vehicles with a maximum of 8 tons. At the mine operation stage every day, it is planned that 1500 - 2000 tons of iron sand are transported using a truck with a capacity of 20 tons per unit. This condition will damage the road

along the transport route because, the maximum weight of the route road is 10 tons.

### 3.3.2 Impact on The Water

According to my observation result, waste from the management of this course will affect the water content in the neighborhood residents. The treatment of iron sand mining equipment will certainly produce used lubricants. The remainder of this used oil if not managed properly will be able to contaminate resident's wells, as well as seawater in the mine environment. The maintenance of heavy iron sand mining equipment is sure to produce used oil as much as 58.49 liters per day. The rest of this used oil if not managed properly will be able to contaminate twin lakes and resident's wells, as well as sea water in the mine environment. This is evident in many quarries who simply carelessly throw their used lubricants into the river or splatter on the ground.

Water will become very unstable or cloudy, so that the type of biota present is targeted. This condition will decrease the number of fish, shrimp, crab, which is an additional livelihood for the community besides farming. The duration of impact lasts for 15 to 18 years.



### 3.3.3 Impact on The Air

At this stage activities include land clearance, mine road construction, mine development, construction of iron sand installation, will certainly increase dust levels in the surrounding environment. This will certainly increase the distribution of dust around the mine and will reach to the residential population due to iron sand transport.

According to my observation research, iron sand mining activities at the pre-construction stage consisted of heavy equipment mobilization totaling 44 units. This will certainly increase the noise in the mine and community settlements. The noise level will increase when mining operations begin to run normally. The duration of noise lasts as much as 150-200 times per day according to the planned volume of 1500-2000 tons per day. With 75-100 rit transport volume per day. This condition will certainly affect the peace of people during sleep.

## **3.4 Principles in The Sand Mining Mining Management Model in Cikalong Sub-District**

Environmental management planning will be effective when considering the economic, social and environmental sectors so that the policy taken as a decision is not only a policy that is technically environment but some related policies. In this research, the policy of environmental management model of sand mining location in Cikalong Sub-district is carried out based on the following principles:

#### 3.4.1 Realizing the Society Empowerment

Sumaryadi (2005) states that empowerment is an effort to improve the level of society and human person. The objective of community empowerment is basically to assist the development of an authentic and integral humanity of the weak, vulnerable, poor, marginal and small communities, as well as to empower these socio-economic groups so that they can be more self-sufficient and able to meet basic needs their lives, but able to participate in community development.

Five strategies of society empowerment according to Ismawan in Sumaryadi (2005) implemented in environmental management, including:

- a) Human resource development program
- b) Group institutional development programs
- c) Private capital cultivation program
- d) Productive business development program
- e) A program of providing appropriate information

The achievement of environmental management objectives will be achieved if all stakeholders including the community are involved intensively, because the community has a problem-solving pattern as well as commitment to engage in broad development. The substance of the environment and the impact of its management directly affect the

community, then the community involvement will facilitate the settlement of problems arising from various development activities related to environmental management.

#### 3.4.2 Implement Sustainable Development

The paradigm of sustainable development should be the main reference in every type of regional development activity. The World Commission on Environment and Development (WCED) defines that sustainable development is development aimed at meeting the needs of the present generation without compromising the ability of future generations to meet their own needs. In order for the implementation of development to remain effective it must be ensured that the development should be aspirational, low risk and environmental conflict. All components of environmental management consisting of eight environmental actors must be involved (Tangkilisan Dalam As'ad, 2005).

The environmental actors are:

- a) Bureaucracy as facilitator
- b) Legislative as control
- c) Judiciary as law enforcement
- d) NGO as a companion
- e) Higher education institution as a consultative institution
- f) Entrepreneurs as responsible party

g) Community as the implementing party

h) Community leaders as leaders

### 3.4.3 Realizing Good Governance

Mardiasmo in As'ad (2005) argues that the orientation of public sector development is to create good governance. According to UNDP in As'ad (2005) the characteristics of good governance are participation, rule of law, transparency, responsiveness, consensus orientation, equity, effectiveness and efficiency, accountability.

### 3.4.4 Paying Attention to Social, Economic and Environmental Aspects

Economic, social and environmental aspects must be taken into account in order to realize sustainable development. One of the requirements in environmentally sound development is that development is full of value, in the sense that development must be oriented towards achieving ecological, social and economic goals.

### **3.5 Steps to Implement the Sand Mining Mining Management Model in Cikalong Sub-District**

The steps undertaken in implementing the sand mining mining management model in Cikalong Sub-district are to realize the selected policies, all policies are interconnected and implemented in an integrated manner for one common goal. The steps are as follows:

#### **3.5.1 Preparation Phase**

Preparatory phase activities are very important to be implemented in order to implement the activities everything is well planned and activities can be implemented in accordance with the main objectives. The preparation stage consists of three aspects, namely administrative aspects, governmental aspects and institutional/community aspects.

##### **3.5.1.1 Administrative Aspect**

- a) Preparation of Regional Regulation on general guidance of the management of mining activity of excavation material c in Cikalong Sub-district
- b) Regulation of Bupati Regulation about technical guidance of management of mining activity of excavation material c in Cikalong Sub-district

- c) Making Circular Letter Regent about the management of mining activities of minerals c in Cikalong Sub-istrict
- d) Making a Decree of the Regent on the Development Team of Agro-tourism Development Activities in Cikalong Sub-district
- e) Making a Decree of the Regent on the Implementation Team of Agro-tourism Development Activities in Cikalong Sub-district
- f) Preparation of budget plan of activity unit (RASK) for agrotourism development activity in Cikalong Sub-district
- g) Development of operational activities of agro-tourism activities in Cikalong Sub-district

#### 3.5.1.2 Governmental Aspect

- a) Appoints a Team for Fostering Agro-tourism Development Activities in Cikalong Sub-district
- b) Appoints an ‘Agro-development Activity Team’ Team in Cikalong Sub-district
- c) Holding inter-sector coordination meetings related to agro-tourism activities in Cikalong Sub-district
- d) Sending personal to be educated and trained related to agro-tourism activities

- e) Seek funds for the implementation of activities

#### 3.5.1.3 Institutional/Community Aspect

- a) Conducting problem-mining activities and preparing an action plan for dealing with sand mining activities using participatory development planning methods such as Participatory Rural Appraisal (PRA), DAMAS (Community Empowerment) or P3MD (Participatory Planning of Rural Development).
- b) If in accordance with the concept of agro-tourism, then the next held the initial socialization and invite the community to plan activities and development related to agro-tourism in Cikalong Sub-district
- c) Conduct an approach to society through existing institutions, community leaders, religious leaders, women leaders and youth leaders.
- d) Invite the community to take an active role in all phases of the implementation of agro-tourism activities in Cikalong District

### 3.5.2 Activity Implementation Phase

The activity implementation phase is divided into several stages, namely:

#### 3.5.2.1 Activities to Realize a Culture of Awareness and Environmental Awareness on All Stakeholders Involved in Agro-Tourism Activities

This activity is carried out in the form of socialization, counseling, seminars, brainstorming, leaflet and brochure spread to all stakeholders involved such as district government apparatus, sub-district apparatus, village government, village management boards such as LKMD, BPD, TP.PKK, UED, Karang Taruna, community leaders, religious leaders, youth, women, the poor and marginalized, workers in sand mining, landowners, land tenants, and employers.

This activity is carried out by a team headed by Bappedalda (Regional Environmental Impact Management Agency). This activity is expected to create a common perception on all sides of the understanding of the environment and foster a culture of conscious and caring environment in every area of their lives.

Activities are carried out in stages and their place in a place close to where the stakeholders are located. For example, for the district government apparatus is implemented in the district, while



for the village community in the village hall or house of the local people. Charges are charged to district government and community self-help. The materials and methods are implemented to adjust to the situation conditions and background of existing human resources so easily captured and accepted material provided in order to realize the objectives as expected.

#### 3.5.2.2 Localize Activity and Stop Mining Activities

This activity is undertaken explicitly by the Regent through Bappedalda (Regional Environmental Impact Management Agency) and Department of Forestry and Plantation and KSDA (Natural Resource Conservation) but its implementation with humanitarian approach so as not to cause new problems and social problems. It is hoped that with the growth of culture conscious and caring environment then this activity will be easy to be implemented. The government also provides other livelihood alternatives so that people working in sand mining will not be doomed to their fate by losing their jobs, by taking part in the workforce related to agro-tourism. Before the mining activities were officially closed and enforced by the apparatus, an approach and understanding of the sand miners through the local village heads and their respected and respected figures were adopted.

The aim of localization activities is to prevent the spread of agricultural land which is sold or rented for sand mining activity. Standardized and regulated by the Village, Sub-District and Regency Governments on the rules of leasing or selling of land for sand mining activities, so there is a tendency for people to reluctant to rent / sell their land.

The imposition of sanctions firmly and clearly on the parties that violate sand mining, strict supervision in the field which is carried out with the help of the local community. With the supervision of the community it will be easier monitoring and more effective.

### 3.5.2.3 Community-Based Crop Management and Soil Conservation

#### Activities

The first thing to do in land conservation planning is to know the level of erosion hazard that occurs as well as the factors causing erosion. Proper crop management and soil conservation will be able to control erosion occurring in sand mining sites. Then sought the accuracy of land use by using the score and classification of the characteristics of a land determined by the Land Rehabilitation and Soil Conservation Center, Ministry of Forestry (Asdak, 2004).

Among the components of USLE (Universal Soil Loss Equation), factors that can be controlled to prevent erosion are factors of crop management, soil conservation and topography. The principle that should be given to the farmers of Cikalong Sub-district is that the erosion of soil that occurs on their lands will decrease the productivity per unit area. With this understanding it is hoped that it is easier to direct the farmers to always act in the perspective of soil and water conservation efforts.

A common obstacle is that some farmers are reluctant to change. Erosion control through conservation techniques is often not directly accepted because of the low education of farmers, usually in the early stages of indifference despite being visited by extension workers. Therefore, community empowerment should always be put forward in every planning, implementation and supervision of their agricultural activities.

The existence of community involvement in each stage of activities will realize the achievement of the goal. The empowerment of peasant communities will realize the growth of farmers' ability to know their real problems and the growing awareness of themselves to overcome the existing problems according to their needs and abilities. The Department of Agriculture in collaboration with the Department of Tourism and

the Department of Forestry and Plantation and the KSDA (Natural Resource Conservation) motivates and facilitates the farming community to turn into an environmentally sound agribusiness farmer.

The success of soil conservation depends on erosion issues, land suitability with conservation measures associated with agricultural systems or land use, how far land users feel it is important to adopt conservation measures, and existing technical and non-technical assistance (uterus, 2004).

Here's the description for each of these following actions:

1) Agronomic measures, based on the role of ground cover plants in reducing erosion. The effectiveness of plants in protecting the soil depends on its density and morphology. The types of crop management that can be implemented in sand mining sites are as follows:

a) crop rotation, ie cultivating land with successive crops over time during the year. Since the rate of erosion at the sand mining site is high, the frequency of cropping marches like corn, nuts and vegetables is cultivated low (once in five years). Soybean crop is very good to be planted because this plant has a high ability in reducing erosion

(canopy soybean crops and close to the soil surface). Grasses and legumes can be incorporated in the crop rotation system because it is good for controlling erosion and also enhances main crop production.

- b) Plants cover the soil, usually of a leguminous type.
- c) Cultivation of the path, making of the track is done by contour or perpendicular to the slope direction because slope level of sand mining location is more than 13%. Plants planted in the lane are carried out by rotation and on steeper slopes are planted by grass. The line is used as a buffer with the width of anatar 2-4 meters wide.
- d) Double cropping, done to increase production per unit area and provide protection for the soil against erosion. Double cropping can be done by sequential cropping or growing more than one crop in an area.
- e) High density cropping to prevent erosion.
- f) Provision of mulch from plant species to protect the soil from the effects of rain granules, reducing the speed of surface runoff and wind.

- 2) Soil Management, intended to maintain soil fertility. Fertilized soil can increase crop yield and minimize erosion rate. Soil management that can be done in sand mining areas includes maintenance of soil organic matter and soil stabilization, piracy practice can not be done because of sloping land. The addition of soil organic matter serves to maintain soil fertility, increase soil cohesion, increase soil capacity for water retention and stabilize soil aggregates that can indirectly control erosion rate. The use of soil feed compounds in the form of organic matter, polyvalent salts and various synthetic polymers can be added to bind the soil particles into aggregates (Morgan in Rahim, 2004).
- 3) Mechanical method, made swales according to contour, terracing and or making of water way. The use of contour swales is prepared for a particular crop-like plant such as beans or vegetables. Swallowing also helps to reduce the run off rate and the sluggish surface flow is very lacking in its ability to move or soothe the top soil layer. Because the land includes sloping so made a porch bench, which is like a bench. Upright sides of the terrace should be

planted with grass that can increase the height of the cliff or be given stones.

#### 3.5.2.4 Activity of Agriculture System Based on Environment and Based on Agribusiness

Environmentally-based farming system is done in accordance with the recommended crop management techniques and soil conservation so as not to damage the environment, it can control the rate of erosion. The advantage of agriculture remains to be considered because most of the farmers in Cikalong Sub-district are poor farmers, so that the cultivated produce must benefit their economy. One of them is agribusiness farming system that support agro-tourism. Community empowerment must be put forward so that this system can be realized real and sustainable. The Department of Agriculture in collaboration with the Department of Tourism, Department of Forestry and KSDA (Natural Resource Conservation), Cooperative Office, Economic Affairs and Village Government to facilitate and motivate the local community.

#### 3.5.2.5 Land Reclamation Activities of Former Iron Sand Mining

The next step of halted iron sand mining activities is reclaimed the former sand mining area. The first stage is to level the land using heavy equipment so it does not puncture and

become flat. Furthermore, the land closure with organic materials from plant species such as straw, grass, vegetables and receive the soil. Further planted with plants resistant to sand soil conditions. In addition, landfills are carried out with special soils for sites planned for cultivation of crops. Some of the land is covered with paving and grass because it is used as a parking location and means of play.

This land reclamation activity requires a large cost, large energy, and takes a long time because it is the loss of all the existing soil layers. Land reclamation activities are planned and implemented in an integrated manner among the stakeholders involved, ie government, employers and communities in community empowerment mechanisms Without the integration of the land reclamation plan will be difficult and long to materialize. In a certain period of time, if there is already a layer of soil that is formed then began to be planted certain plants that can grow on barren land or sand land.

#### 3.5.2.6 The Development of Facilities and Infrastructure of Agro-Tourism

##### Location

The land already becoming flat then times to began the implemented activities of facilities and infrastructure development



of agro-tourism location. Community empowerment and involvement of all stakeholders should always be realized in planning, implementation and monitoring. Local people are invited to take part in the planning stage so that the ideas or development projects being worked on can be accepted by the community. In the implementation of the community are also involved, for example as labor, ordering snacks and food for labor or other things needed in the implementation of activities. Development projects received by the community, planned and implemented with the community will bring about sustainable development, in the sense that it is not damaged by the community because the community feels to have the results of development. The construction of physical facilities in the form of buildings and roads should pay attention to environmental aspects so that short term and long term doesn't causing damage to the environment.

Communities are also involved in the activities of managing agro-tourism activities, farmers' communities are prepared for visits to their farms, local food vendors with typical Cikalong food, janitors and others. However, the quality and quantity of human resources remain to be considered so that the quality of eco-tourism is maintained.

### 3.5.2.7 Tourism Promotion Activities

The next step is promotional activities, without any promotional activities then the location of agro tourism will be quiet and not known by other people so the purpose of development will not be achieved. Promotion activities are also realized through community empowerment. Promotional activities are carried out through advertisements on radio stations, entry into school programs, newspapers, leaflets and brochures, information dissemination to various government agencies and community institutions in all villages and banners in several strategic places. For the initial promotion can be done some art performances that breathe the local culture and played by the local community as well.

### 3.5.2.8 Agro-tourism Activity

The location of agro tourism along the coast of Cikalong Sub-District will attract visitors both from within and outside the region with human resources, adequate facilities and infrastructure and promotion. All activities in the agro-tourism site must have an awareness of the environment, so that environmental conservation is fully maintained. The hygiene factor is also considered so that along the coastline it will not be polluted due to garbage or

anything else. All existing managers and officers as well as local people are also environmentally friendly, always actively invite and mobilize visitors to keep the environment in their every behavior. Sanctions for violating regulations for disobeying the rules and damaging the environment are imposed on fines regardless of who the perpetrators are.

The influence of the presence of visitors from outside the area should also be considered and anticipated as early as possible so that there will be no negative influences that enter and affect the local culture. According to BPS in 2015, the population in Cikalong Sub-district is 63,386 people with density per-km<sup>2</sup> reach 454 people. 25% of the population are migrants. Tourists who come along the coast of Cikalong Sub-district reach about ±150 people per day, especially in certain events such as Eid or New Year. Religious figures and community leaders are always invited to participate so that they are able to invite and invite the community to keep behaving properly and politely in accordance with normality rules of life. The existing traditions and cultures are preserved to characterize the people of Cikalong Sub-District. The management of lodging for visitors is also left to the people whose homes are eligible. Previously people were trained how to receive and serve visitors well.

### 3.5.2.9 Monitoring, Evaluation and Reporting Activities

Periodically (three times in a month) the Government of Cikalong Sub-district through the Monev Team, headed by Bappedalda, conducts monitoring and evaluation by reporting to the Bupati. Sub-District and Village Governments also periodically conduct monitoring, evaluation and reporting. The Monev team consists of BAPPEDALDA (Regional Environmental Impact Management Agency), BAPPEDA (Development Planning Agency at Sub-National Level), Department of Forestry and Plantation and KSDA (Natural Resource Conservation), Tourism Office, Agriculture Agency, Market Office, DIPENDA (Income Office Region), Village Community Empowerment Agency, Village Government Section, DEPRINDAG (Department of Industry and Commerce), Cooperative Office, Economy Section, and DPU (Public Works Service). Monitoring, evaluation and reporting are also carried out by local communities through existing institutions such as LPMD (Institute for Village Community Empowerment), BPD (Village Deliberation Agency) and TP.PKK Desa (Team Drivers for Village Family Welfare Empowerment) so that there is an opportunity for the community to participate in developing and maintaining.

Aspects of monitoring and evaluation include the state of the physical infrastructure, the smoothness of activities, the presence of visitors, the role of officers and managers, environmental sustainability. Based on monitoring, it is evaluated on several matters so that it can be used as a basis for further policy making.

Monitoring performed by regular field visits, unannounced visits, written or oral report requests, and surveys. Monitoring activities are conducted in an integrated manner between the related agencies so that the monitoring conducted can cover all aspects. In every monitoring activity the elements of community and managers are invited so as to give explanation to the monitoring officer. Tools that can be used in the implementation of monitoring are camera, handy cam, notebook and recorder.

#### 3.5.2.10 Community Empowerment Activities in Agro-Tourism

Community empowerment activities carried out from the beginning are PRA (Participative Rural Appraisal), DAMAS (Community Empowerment) and P3MD (Participatory Planning of Village Community Development). These three methods are almost identical in the materials and implementation system in the field by using village sketches, seasonal calendars, institutional charts, and livelihood analysis to explore the problems and needs

of the community as well as the handling / activities to be undertaken. With this method, all elements of society are included such as religious leaders, administrators of village institutions, administrators of RT (Neighborhood Association) and RW (citizens Association), village apparatus, youth, women, poor, farmers groups, and the existing decision is not a decision of a particular party / individual but a decision based on mutual agreement with the means established in the three methods.

With the empowerment of the community, the community will actively take part and feel the existing development so that physical and non-physical sustainability can be expected significantly and the purpose of development will be easily achieved without the neglected parties / disadvantaged. Community empowerment in agro-tourism is both physical and non-physical in accordance with the existing capabilities of the local community.

Non-physical community empowerment in agro-tourism among others is the participation of the community in planning the form of agro-tourism to be applied, the type of plant to be planted, the type of building to be built, and other planning, the participation of the community in the implementation of tourism promotion, participation in monitoring- reporting, and so forth.

While the physical participation of the community such as participation in the workforce in the construction of buildings / physical facilities, the participation of the community in art performances, the participation of the community into labor at the site agro, the participation of farmers who included visited guests, participation to be part of home stay services and so forth. Private and government parties act as facilitators and supporters. The role of good government in harmony with community empowerment so that it can be implemented in an integrated and mutually beneficial for both parties.

Development activities with community empowerment take a long time with no small funds, but success in any program will be realized in a real and sustainable way. Empowerment is a process as a result of which the individual has the independence, motivation and skills necessary to carry out the work in ways that give it a sense of ownership and fulfillment in achieving common goals (Sumaryadi, 2005).

In the context of community life, empowerment is an effort to provide the ability as well as opportunity to the community to play an active role in the development process.

To implement community empowerment according to Sumaryadi (2005) there are several considerations that must be considered, namely:

- a) Leaders must have a clear understanding of the concept of empowerment
- b) The concept of empowerment assumes a change in culture including the organizational and corporate culture
- c) Leaders, bureaucrats, managers must be aware of a role change in which their role may be reduced
- d) Individuals (communities) must transform themselves and remove mental conditioning (fears, confusion, discomfort, unstable tendencies, lack of self confidence) within them.
- e) The process of empowerment is not something instant, this process takes time and differs from individual to individual.