



# Implementation of Forest Protection Policies in Riau Province: Case Study on Mangrove Forests in Bengkalis Regency

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## ABSTRACT

This research is motivated by maintaining and protecting the sustainability of mangrove forests, the community must be directly involved because they better know and understand the condition of mangrove forests in their environment, while the Plantation and Forestry Office of Bengkalis Regency has more coordination and facilitation activities, therefore government efforts are urgently needed to increase community participation in the protection of these mangrove forests. However, on the ground, the community is not directly involved in protecting mangrove forests, and efforts to increase community participation in protecting mangrove forests are still lacking. As for the research, how is the Mangrove Forest Protection Policy implemented in Bengkalis Regency, and what factors influence the implementation of the Mangrove Forest Protection Policy in Bengkalis Regency. This research aims to determine the implementation of the Mangrove Forest Protection Policy in the Bengkalis Regency and the factors influencing the implementation of the Mangrove Forest Protection Policy in the Bengkalis Regency. The method used in this study is qualitative research methods. The informants in this study amounted to six people; the techniques used in this study, interviews, observations, and documentation of the results indicate that the rehabilitation policy and determination of mangrove ecosystem tourism objects in Bengkalis Regency need to be carried out. Sustainably by involving the local community with a pattern of community empowerment while the obstacles that occur in the management of mangrove ecosystems in Bengkalis Regency The government is less strict in implementing policies to implement Government Regulation Number 60 of 2009 concerning Protection of Mangrove Forests in Bengkalis Regency.

**Keywords:** *Implementation, Policy, Forest Protection in Bengkalis Regency.*

## 1. INTRODUCTION

There are two paradigms in the natural resource management system: state-based forest management and community-based forest *management*. The first paradigm places the government in a central and decisive position, while the community only has a complementary role. On the other hand, the second paradigm places the community as the leading actor, while the government only acts as a facilitator and administrator to support the process. Forests are one of Indonesia's priceless natural resources, including mangrove forest areas with unique and unique ecosystems. This natural wealth has excellent potential for human interests. So it needs to

be considered and preserved. Indonesia is an archipelagic country with the world's largest mangrove forest area. Indonesia's mangrove forests are productive ecosystems with a high potential for sustainable use. Fisheries and mangrove forest products are potentials that can be exploited economically. Mangrove forests in the Bengkalis Regency are part of the Indo-Malayan vegetation formation, which includes the coasts of Indonesia and Malaysia, especially Riau. The area of mangrove forests in Bengkalis Regency is 41,718 hectares spread along the coast on all islands. To see the distribution of mangrove forests in Bengkalis Regency can be seen in the following table.

**Table 1.** Area of Mangrove Forest Distribution in Bengkalis Regency in 2019

No.	District	Land Area (Ha)
1.	North Rupa	10,784
2.	Rupa	4,806
3.	Bantan	4,584
4.	Bengkalis	3,258
5.	Mandau	5,721
6.	Pinggir	1,215
7.	Siak Kecil	2,452
8.	Bukit Batu	798
<b>Total</b>		<b>41,718</b>

Source: District Forestry Service. Bengkalis 2020

Along with the increasing population, the socio-economic conditions of the community are also experiencing rapid changes. It is because the population density has approached and even exceeded the average balance level between the area and the impact of increasing population on forest sustainability. With the increasing population, especially in coastal areas, the community's need for firewood, carpentry wood, pasture land, and new jobs is also increasing.

Along with the rapid increase in development by developing the national economy, coastal and

coastal areas are in an important position. Industrial centers, power plant centers, recreation sites, settlements, aquaculture, and other transportation facilities widely built in coastal areas are a dilemma. On the one hand, it can increase people's income. Still, on the other hand, it can have a negative impact if the implementation is not carried out in a coordinated manner and only prioritizes the interests of a particular community group. Damage to mangrove forests in Bengkalis Regency can be seen in the following table:

**Table 2.** Damage to mangrove forests in Bengkalis Regency in 2019

No.	District	Area of Damage (Ha)
1.	North Rupa	25.3
2.	Rupa	1.5
3.	Bantan	20.7
4.	Bengkalis	0.5
5.	Mandau	3
6.	Pinggir	5.3
7.	Siak Kecil	7.8
8.	Bukit Batu	-
<b>Total</b>		<b>64.1</b>

Source: District Forestry Service. Bengkalis 2020

Changes in the function of mangrove forests have implications for the orientation of managers. It also influences the contribution of participation to the community around the forest, which in turn causes socio-economic problems for the community that impact the threat to the sustainability of mangrove forests, such as what happened on the coast of Bantan District, Bengkalis Regency. In connection with a large amount of forest destruction, the government has issued Government Regulation of the Republic of Indonesia Number 45 of 2004 concerning Forest Protection.

The purpose of Government Regulation is to implement the Law of the Republic of Indonesia Number 41 of 1999 concerning Forestry. The law aims to protect forests, forest products, forest areas, and their environment. It concerns protection function, conservation function, and production function are achieved optimally and sustainably and to prevent and limit forest damage caused by human activities,

disturbance of livestock, fire, natural resources, and pests and diseases. Article 5 of the Government Regulation of the Republic of Indonesia Number 45 of 2004 concerns Forest Protection. It explains that the implementation of forest protection aims to protect forests, forest products, forest areas, and their environment so that the protection, conservation, and production functions are achieved optimally and sustainably. The following is the identification of problems in this study, among others:

1. The number of damage to mangrove debt in the coastal area of Bengkalis Regency, especially in Bantan District and North Rupa District, both caused by natural factors such as abrasion and caused by human factors such as illegal logging.
2. The occurrence of land conversion and the manufacture of wood charcoal and so on. So

there are indications since the implementation of Government Regulation of the Republic of Indonesia Number 45 of 2004 concerning Forest Protection.

3. It has not significantly impacted the sustainability of mangrove forests in Bantan and North Rupa sub-districts; even the existing mangrove forests have always experienced a drastic reduction due to the various causes above.

The leading cause of damage to mangrove forests in Bengkalis Regency, especially in Bantan District, is due to commercial logging and conversion of mangrove forest areas. Changes in the use and function of mangrove land and various land-clearing activities have caused a decrease in the area of mangrove forests and changes in the composition of vegetation in various growth strata.

In order to maintain and protect the preservation of mangrove forests, the community must be directly involved because they are the ones who know and understand the condition of the mangrove forest in their environment, while the Bengkalis Regency Plantation and Forestry Service have more coordination and facilitation activities, for this reason, efforts are needed to government efforts to increase community participation in the protection of the mangrove forest. However, on the ground, the community is not directly involved in protecting mangrove forests, and efforts to increase community participation in protecting mangrove forests are still lacking. Based on the description above, the researcher is interested in taking the study title entitled "Implementation of Forest Protection Policy in Riau Province (Case Study on Mangrove Forest in Bengkalis Regency)."

## 2. LITERATURE REVIEW

### 2.1. Public Policy Implementation Public

Policy always contains at least essential components, namely clear goals, specific goals, and ways to achieve these goals. The third component is usually not explained in detail and the bureaucracy must translate it into action programs and projects. The method component relates to the implementer is how and where the funds are obtained. Also, who is the target group, the program implemented, the management system, and how the success or performance of the policy is measured. This component is called implementation [1].

Policy implementation is not only concerned with elaborating political decisions into routine procedures through bureaucratic channels. More than that, it concerns issues of conflict, decisions, and who gets what from a policy (Grinder, 1980).

The view above shows that the process of implementing public policies only concerns the behavior of administrative bodies. The policy should be responsible for implementing programs and causing obedience to the target group but involves the circle of political, economic, and social forces that directly or indirectly influence the behavior of all parties involved and, in the end, bring logical consequences to the expected and unexpected impacts.

Implementation is one of the stages in the public policy process. Usually, implementation is carried out after a policy is formulated with clear objectives. Implementation is a series of activities to deliver policies to the community so that these policies can bring results as expected (Afan Gaffar, 2009: 295). This series of activities include preparing a set of further regulations, which are the policy interpretation. For example, from a law a number of Government Regulations, Presidential Decrees, and Regional Regulations emerge, providing resources to drive implementation including facilities and infrastructure, financial resources, and of course who is responsible for implementing the policy, and how to deliver the policy. Concretely to society.

Policy implementation, in principle, is a way for a policy to achieve its goals, nothing more and nothing less. There are two options to implement the public policy: direct implementation in the form of programs or through the formulation of *derivatives* of these policies. Public policies in the form of laws or regional regulations require an explanatory public policy or are often termed implementing regulations. Public policies that can be directly operationalized include Presidential Decrees, Presidential Instructions, Ministerial Decrees, Regional Head Decrees, Service Head Decrees, etc. [5, p. 158-160].

Daniel A. Mazmanian and Paul A. Sabatier (1979), quoted by Solichin Abdul Wahab, explain the meaning of this implementation by saying that: understanding what happens after a program is declared valid or formulated is the focus of attention on policy implementation, namely events and activities that arise after the ratification of State policy guidelines, which include both efforts to administer them and to cause real consequences/impacts on society or events (Solichin Abdul Wahab, 1997: 64-65).

The definition of implementation above, when associated with the policy, is that the policy is not only formulated and then made in a positive form, such as a law, and then silenced and not implemented or implemented, but a policy must be implemented or implemented to have the desired impact or goal. Policy implementation aims to achieve certain goals with

specific means and in a particular time sequence (Bambang Sunggono 1994:137).

According to George C Edward III in Subarsono [10: p. 90] gives the view that four variables, namely, 1. influence policy implementation. Communication 2. Resources 3. Position (attitude), 4. Bureaucratic structure and the four variables are interconnected with each other as can be described as follows:

### 1. Communication factor (Communication)

The success of policy implementation requires that the implementor knows what to do. The goals and objectives of the policy must be transmitted to *the target group* to reduce the distortion of implementation. If a policy's goals and objectives are unclear or even unknown to the target group, resistance from the target group will likely occur.

### 2. Resource Factors

Human resources also have an essential role in conveying provisions or rules and how accurate they are in conveying them, but if the personnel responsible for implementing policies lack the resources to do work effectively. Essential sources in implementing the policy in question include staff who must have the expertise and ability to carry out tasks, orders, and recommendations from superiors. In addition, there must be a balance between the number of staff needed and the skills that must be possessed according to the task to be carried out.

### 3. Disposition Factors

Disposition is defined as the tendency, desire, or agreement of the implementers to implement the policy. In implementing policies, if they want to succeed effectively and efficiently, the implementers must not only know what to do but must also have the ability to implement policies/programs/regulations. In reality, most implementers cannot implement policies freely because of their dependence on the superiority of those who formulate policies and the complexity of the policies themselves

### 4. Bureaucratic Structure

The bureaucracy is one of the agencies that most often implement policies. Bureaucracies consciously or unconsciously choose organizational forms for a collective agreement to solve social problems in modern life. The organizational structure in charge of implementing the policy has a significant influence on the implementation of the policy. An organizational structure that is too long will weaken supervision and create *red tape*, a complicated and complex bureaucratic procedure. This, in turn, will lead

to inflexible organizational activities. Apart from that, according to Edwards, there are two main characteristics of bureaucracy: basic working procedures, *Standard Operating Procedures* (SOP), and fragmentation.

## 2.2. Conservation of Mangrove

Both conservation and forest mangrove are forest vegetation that grows and is influenced by tides so that the floor is constantly flooded (Purnobasuki, Henry, 2005: 5). Mangrove plants are unique because they are a combination of the characteristics of plants that live on land and in the sea. The word mangrove is a combination of Portuguese mangue and English grove. In English, the word mangrove is used to designate plant communities that grow in tidal ranges and individual plant species that make up the community [12, p. 5].

In Portuguese, the word mangrove expresses individual plant species, while the word mangal describes the plant community. Mangrove forest is a general term to describe a tropical coastal community dominated by several distinctive tree species or shrubs that can grow in salty waters. Mangroves grow along tropical to sub-tropical coastlines (Nybakken, J.W. 1992: 30).

Mangrove forests have a flat and dense canopy and have tree species that are always leafy. The environmental conditions in which mangrove forests grow have extreme factors such as the salinity of the groundwater and the soil being inundated with water continuously. Although mangroves tolerate salty soils (halophytes), they are more facultative than obligated because they can grow well in fresh water. Mangrove flora consists of trees, epiphytes, lianas, algae, bacteria, and fungi. The types of plants found in Indonesian mangrove forests are about 89 species, consisting of 35 species of trees, 5 species of herbs, nine species of shrubs, 9 species of lianas, 29 species of epiphytes, and 2 types of parasites (Nontji, A. 1987:24).

Of the many types of mangroves in Indonesia, the most common types of mangroves are api-api (*Avicennia* sp), mangrove (*Rhizophora* sp), tancang (*Bruguiera* sp), and bogem or pedada (*Sonneratia* sp), which are the central mangrove plants. which are often found. These mangroves are mangrove groups that capture, hold sediment and stabilize their habitat soil. Mangrove fauna represents almost all species, ranging from simple protozoa to birds, reptiles, and mammals. Mangrove fauna can be divided into terrestrial fauna, freshwater fauna, and marine fauna. Land fauna includes long-tailed macaques (*Macaca* spp.), monitor lizards (*Varanus Salvator*), various birds, and others. Meanwhile, marine fauna is dominated by Mollusca

and Crustacea. The Mollusca group is generally dominated by Gastropods, while the Crustaceae group is dominated by Brachyura (Purnobasuki, Henry, 2005: 5). Mangrove forests have various functions. According to Rahmawaty, several functions of mangrove forests are as follows:

#### a. Physical Function

They are keeping the coastline stable, protecting the coast from erosion (abrasion) and seawater intrusion, reducing waves and storms, retaining mud, capturing sediment, controlling floods, treating waste materials, producing detritus, maintaining water quality, absorbing CO<sub>2</sub> and producing O<sub>2</sub> and reducing the risk of tsunami hazard. Areas with a mangrove zoning front are less damaged than areas that do not have a mangrove forest front. Changes in the ecosystem environment of the coastal marine area will indirectly affect the community system, including the diversity of species and community structures in the ecosystem.

#### b. Biological function

It is a nursery ground, a feeding ground, and a spawning ground for various marine biota, a place for birds to nest, a natural habitat for various types of biota, and a source of germplasm (animals, plants, and microorganisms.) and malaria control. c. Socio-Economic Functions

Source of livelihood, production of various forest products (wood, charcoal, medicine, and food), sources of building materials and crafts, natural attractions, educational and research objects, aquaculture areas, salt-making sites, and plantation areas (Kartawinata, K., S. Adisoemarto, S. Soemodihardjo, and IGM Tantra, 1979: 21-39). Basically, mangrove forests are rich ecosystems and have become one of the most productive resources. However, it is often considered abandoned land and has no value, so utilization in the name of development causes damage. Pond management does promise lucrative results, but it is essential to look at the sustainability and sustainability of the previously formed environment. This condition requires a clear and accurate strategy to maintain and adequately manage intact mangrove forests. For this reason, it is necessary to study the utilization of the potential of mangrove forests, as part of the coastal ecosystem, in a community-based sustainable manner [13].

Efforts to preserve mangrove forests can be carried out through silvofishery techniques and a bottom-up approach to rehabilitation efforts. Silvofishery is a fish and shrimp farming technique combined with forestry plants, such as mangrove forest vegetation. This effort is carried out to improve

the welfare of the community around the forest and maintain the mangrove forest ecosystem so that its survival is maintained [13].

Government regulations have regulated mangrove forest management. Based on Law Number 41 of 1999 concerning Forestry, it is stated that regarding the condition of damaged mangroves, everyone who owns, manages, and or utilizes critical or production forests is obliged to carry out forest rehabilitation for conservation protection purposes [17].

In Law Number 23 of 2014 concerning Regional Government, the Central Government is limited to general patterns and the preparation of macro forest and land rehabilitation plans [18]. Meanwhile, the implementation of forest and land rehabilitation is carried out by local governments, especially Regency/City Governments, except in conservation forest areas which are still under the authority of the Central Government. In addition, the government must maintain the condition of the existing mangroves by stopping permits aimed at converting mangrove forests into other forms such as ponds, agriculture, HPH, industry, settlements, and so on.

### 3. METHODS

The research design used qualitative research methods, namely efforts to collect, compile and interpret existing data and then analyze the data, research it, describe and examine more clearly the various factors related to the conditions, situations, and phenomena being investigated (Lexi J. Meleong, 1991:30). This research design can undoubtedly describe the journey of an idea or thought related to the problems that are limited in this research. This research was conducted at the Office of Plantation and Forestry of Bengkalis Regency because the Office of this Service is the location of research related to the Implementation of the Mangrove Forest Protection Policy in Bengkalis Regency.

### 4. RESULTS AND DISCUSSIONS

#### 4.1. Implementation of Mangrove Forest Protection Policy in Bengkalis

##### 4.1.1. Regency Mangrove

The forest is a typical vegetation found in tropical coastal areas. Mangrove vegetation thrives in sloping coastal areas near river banks and beaches protected from wave forces. Habitat characteristics that stand out in the mangrove forest area include

muddy, loamy, or sandy soil types, periodically inundated seawater, and receiving sufficient fresh water from the land, such as rivers, springs, and groundwater. The water is salty. The existence of these environmental factors causes the mangrove habitat to be specific, which can only be occupied by certain types of plants and fauna adapted to the local environment. Mangrove forests have physical and ecological functions that are important for the sustainability of ecosystems in coastal areas. Physically, the mangrove forest serves as a coastal protector from the effects of ocean waves. Ecologically, the mangrove forest functions as a nursery ground, a spawning ground, and a feeding ground for various aquatic biotas such as fish, shrimp, and crabs.

#### 4.1.2. Communication

The communication referred to in this study is how the Bengkalis Regency government disseminates policies on forest protection, especially mangrove forests, to the community in Bengkalis Regency; this socialization is crucial because, with socialization, the community can find out precise information about the policies to be implemented. Local government.

In addition to socialization, local governments must also convey information about the importance of conserving mangrove forests, because with this information the community will know how significant the benefits of mangrove forests are for life, especially for those who live around the coastline so that people will try their best to preserve the existence of the mangrove forest. Furthermore, with the enactment of the government's policy on forest protection, any community that violates the stipulated provisions will be subject to sanctions. In connection with the assessment criteria regarding communication carried out by local governments in the context of implementing Government Regulation Number 60 of 2009 concerning Forest Protection, especially mangrove forests in Bengkalis Regency, it includes several sub-indicators:

- a. Conducting socialization on policies regarding the protection of mangrove forests
- b. Provide information to the community about the importance of conserving mangrove forests
- c. Provide information to the public regarding sanctions for those who destroy mangrove forests

#### 4.1.3. Resources

Resources are implementing elements that also have a significant role in implementing a policy. Therefore, it is necessary to have skilled and relevant personnel of the right size because policy implementation will not be effective if it is not handled by experts who are relevant to their duties.

Resources are essential in implementing good policies. The study resources are the availability of supporting sources for policy implementation. It includes:

- a. Providing quality human resources as policy implementers
- b. Provide the necessary facilities in the implementation of the policy
- c. Provide an adequate budget for the implementation of Policy

#### 4.1.4. Disposition

The disposition in question is how the performance form of the policy implementers, namely the Bengkalis Regency government apparatus, in implementing Government Regulation Number 60 the Year 2009 concerning Forest Protection. The form of the disposition includes:

- a. Understanding and Knowledge of Policy Implementers on Mangrove Forest Protection Policy
- b. The response of the implementers to the implementation of the Mangrove Forest Protection policy in Bengkalis Regency
- c. Provide incentives for implementing policies to protect mangrove forests

#### 4.1.5. Bureaucratic

Structure Bureaucratic structure in the form of good coordination between relevant agencies in implementing a policy and managing activities from policymakers to field implementers. The sub-indicators of the bureaucratic structure here include:

- a. Supervise the implementation of policies
- b. Giving sanctions to the implementers of policies for irregularities committed
- c. Having a responsibility to work

In addition, the management of mangrove forests in Bengkalis Regency is currently directed to rehabilitation because of the large number of damaged areas. If the activity is successful, it is hoped to restore its ecological function to provide environmental services for the surrounding community and communities outside the area. However, these rehabilitation activities cannot ignore economic and social issues related to the presence of the surrounding community. Utilization of mangrove forests by the community includes taking wood for building/stakes, raw material for charcoal, and for firewood as well as conversion into ponds. The average annual utilization for building wood/stake is 2,812 trees, charcoal wood 3,217 trees, and firewood for households 2,444 trees, while for the brick industry, firewood reaches 7,657 trees. As a result of uncontrolled use, it was causing damage to mangrove forests, namely the decrease in

tree density every year, which ranges from 0.32%-1.6% or an average of 0.79%.

This decrease in tree density is equivalent to the reduction of 61,255 trees every year. This damage causes a decrease in the physical ability of mangrove forests to withstand abrasion. The abrasion rate per year ranges from 3.6-8.4 meters to an average of 6.03 meters. The analysis results show a positive and significant relationship between the decrease in tree density and the rate of abrasion that occurs.

Mangrove forest management as a tourist location tends to positively impact the community's economy, such as by opening up business opportunities and recruiting workers. The main thing about this program is that the pattern of the community as mangrove forest encroachers is stopped and replaced with a pattern of saving mangroves as an area that is of interest to tourist visitors. Thanks to the Bengkalis Environmental Care Community Group (KEMPAS) 's hard work, Sebauk Village, Bengkalis District, Bengkalis Regency, has a mangrove forest conservation area. The development of the mangrove forest conservation area that has been carried out has become a green open space as well as a natural tourist attraction for the surrounding community. Regarding the implementation of the development of mangrove forest conservation, mangrove tree planting has been carried out since early 2011 and is still ongoing today. The activities carried out are basically to improve the ecosystem around rivers and beaches and preserve the environment. It is developing marine tourism, fostering interest in coastal communities, especially the Sebauk Village community, to cultivate fish, Lokan, crabs, and others. I hope that in the long term, besides being a place for ecosystems and becoming a tourist attraction, it will also create jobs, and its management will generate original village income.

The development of the Mangrove Area is inseparable from the guidance of the Bengkalis Regency Government, namely the Environment Agency, Marine and Fisheries Service, and the Sebauk Village Government. The Environmental Agency (BLH) of Bengkalis Regency conducted socialization and formed a competent group to preserve the Mangrove forest. BLH Bengkalis 2014 has formed four groups in two sub-districts, Bengkalis and Bantan sub-districts, as appointed by the local sub-district head, namely in Bantan sub-district 2 groups and Bengkalis sub-district also 2 groups. The BLH party formed a group to preserve the mangrove forest with the aim that the group that had been formed could replant the damaged mangrove forest.

5. BLH provides that the group that has been formed will receive assistance in the form of nursery costs, provision of polybags, and various agricultural services, provided that the mangrove planting program is not to be cut down but to be preserved.

#### ***4.2. What are the Factors Affecting the Implementation of Mangrove Forest Protection Policy in Bengkalis Regency***

By looking at the condition of the mangrove forest in the Rupert Subdistrict, which has suffered a lot of damage and reduction due to logging and land conversion, the Bengkalis Regency government has made efforts to save the mangrove forest. The existing one is implementing Government Regulation No. 60 of 2009 concerning Forest Protection. However, these regulations are not implemented properly due to several obstacles.

The obstacles experienced by the Bengkalis Regency Government in implementing Government Regulation Number 60 of 2009 concerning Forest Protection, especially mangrove forests in Rupert District, are as follows:

1. Lack of budget support and adequate facilities so that the implementation of Government Regulation Number 60 of 2009 Concerning Forest Protection is not implemented properly
2. Policy implementers in the field are not serious about carrying out the duties and obligations assigned to them, so the results of the work produced are not as expected.
3. There is still a low level of public awareness of the policies implemented and a lack of public knowledge in understanding the importance of mangrove forests' existence for life and the environment.
4. There is no Regional Regulation that specifically regulates the protection of the mangrove forest, the Bengkalis Regency Government is only guided by a Government Regulation which is still very general in nature, namely regarding forest protection in general, so in the implementation of the policy, it is still floating which results in the lack of implementation of Government Regulations. Number 60 of 2009 concerning Forest Protection
5. The Bengkalis Regency Government faces a dilemma in implementing Government Regulation Number 60 of 2009 concerning Forest Protection; on the one hand, the Bengkalis Regency Government wants to implement the policy effectively so that it can preserve the mangrove forest and the environment, but on the other hand, the Bengkalis Regency Government does not turn a blind eye to the condition of the people who depend a lot on the mangrove forest to fulfill their daily needs.

## 5. CONCLUSION

Rehabilitation policies and the establishment of mangrove ecosystem tourism objects in Bengkalis Regency need to be carried out sustainably by involving the local community with a community empowerment pattern. The success or failure in rehabilitating mangrove forests and making mangrove tourism objects cannot be separated from the role of the community in supporting government programs in planning and implementing the rehabilitation of mangrove forests and tourism objects.

It is recommended to the government of Bengkalis Regency. It is given significant authority to the regional head in managing natural resources and the environment to formulate more specific policies or rules for managing mangrove ecosystems in Bengkalis Regency because current policies do not specifically regulate mangroves.

Regarding Forest Protection, especially mangrove forests in Rupa District, it can be seen from the four indicators of policy implementation, namely communication, resources, disposition, and bureaucratic structure, as follows:

1. Lack of adequate budget support from local governments so that the implementation of Government Regulation Number 60 of 2009 concerning Forest Protection is not implemented correctly.
2. No regional regulation explicitly regulates the protection of the mangrove forest.
3. In implementing government policies, policy implementers are not serious about carrying out these policies, so the direction of the policy objectives is not achieved correctly.
4. The government is less firm in implementing policies to implement Government Regulation Number 60 of 2009 concerning the Protection of Mangrove Forests in Bengkalis Regency.
5. Public awareness is still low on the policies implemented and there is still a lack of public knowledge in understanding the importance of the existence of mangrove forests for life and the environment.

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