

**COMMUNITY EMPOWERMENT AND SUSTAINABLE ECONOMIC  
IMPROVEMENT THROUGH SEMUT ISLAND ECO-TOURISM VILLAGE  
PROGRAM BY PT PERTAMINA PATRA NIAGA FUEL TERMINAL SEI SIAK****Syofiyardi\*, Riyadiyanto, Siti Maisarah**

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**Abstract**

The CSR program is a form of the company's contribution to realizing its responsibilities as regulated in Law Number 40 of 2007 concerning Limited Liability Companies. Through Community development as a CSR strategy, PT Pertamina Patra Niaga Fuel Terminal Sei Siak built an ecotourism-based tourism village on Semut Island, Pekanbaru City, Riau Province. This ecotourism village development program aims to empower the community, preserve the environment, and attract tourists, which impacts sustainable economic development. This research uses descriptive qualitative methods with documentation study and in-depth interviews. The results showed that the ecotourism-based empowerment program could contribute to environmental conservation, which increased fish, shrimp, and other biota commodities for food supplies and became an attraction for tourists to Semut Island, which would generate sustainable economic benefits. In terms of society, the Tourism Village program provides Saung Education as a gathering place to increase residents' capacity. PT Pertamina Patra Niaga Fuel Terminal Sei Siak will monitor and supervise the program's sustainability and biodiversity on Semut Island.

**Keywords:** community development; ecotourism; sustainable economy; corporate social responsibility

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**INTRODUCTION**

Tourism is an important aspect that can support people's lives. Its services, which are engaged in services, have become one of the country's mainstays because of the potential of Indonesia's territory (Adom, 2019; Purnomo et al., 2020). On the other hand, social interaction in tourism is a need that must be met in its development (Ridlwan et al., 2017).

Pekanbaru City is one of the areas in Indonesia with a strategic position. The city is on the Trans-East Sumatra route, connected to several cities such as Medan, Padang, and Jambi. It is flanked by Siak Regency in the north and east, while Kampar Regency in the west and south. The city is divided by the

Siak River, which flows from west to east and is located at an altitude ranging from 5-50 meters above sea level. Pekanbaru has a tropical climate with maximum air temperatures ranging from 34.1°C-35.6°C and minimum temperatures between 20.2°C-23.0°C.

One of Pekanbaru's many villages is on Jalan Pengambang RT 03 RW 07, Limbungan Village, Rumbai Timur District, Pekanbaru City, Riau. This area is located on the outskirts of the Siak river, has a beautiful area, and has a small island connected by a bridge. The small island by the community is called Pulau Semut because of its small area and separation from the mainland. The community on Semut Island has already

started the development of an ecotourism village. Ecotourism is seen as capable of developing beneficial natural potential for local groups, nature, and visiting tourists (Nazarullail et al., 2017). Ecotourism itself is environmentally friendly and sustainable tourism.

As explicitly regulated in Law Number 40 of 2007 concerning Limited Liability Companies, PT Pertamina Patra Niaga Fuel Terminal Sei Siak supports this ecotourism development. Semut Island is still part of the PT Pertamina Patra Niaga Fuel Terminal Sei Siak environment, so it is hoped that this support can accelerate the growth of ecotourism on Ant Island. In addition, PT Pertamina Patra Niaga Fuel Terminal Sei Siak is committed to boosting the economy of the people living in the vicinity by taking the first step to creating a green environment to form a new tourist area. The community's ecotourism development resulted in procuring a wooden bridge connecting Ant Island and the surrounding area. However, Ant Island still has to improve to provide adequate facilities to become an ecotourism area.

This empowerment-based Diversity Program begins with planting ornamental plants, fruits, and mangroves by empowering local communities and collaborating with the Tourism Awareness Community (POKDARWIS) (Karim et al., 2017). Then the support focuses on developing tourism-supporting facilities and infrastructure such as Saung Education, Tourism Gate, Revitalizing Bridges, Making Photoboosts, and Construction of Abrasion Retaining Sheets around Ant Island. As a company, Sei Siak Fuel Terminal contributes to building a sustainable environment and preventing environmental damage.

In line with the corporate social responsibility (CSR) activities of PT Pertamina Patra Niaga Fuel Terminal Sei Siak, survey data from the Central Statistics Agency (BPS) of Riau Province in 2021 shows an impact from the pandemic that has been going on for the past two years. The Riau Province BPS

survey results showed that the pandemic-affected workers with salaries below 3 million were the most affected. The pandemic affects the poor, those vulnerable to poverty, and those who work in the informal sector. So after the pandemic, ecotourism is estimated to be the most popular tourism product. This product can also be developed into a combination of natural and cultural tourism, the empowerment of MSMEs, and the creative economy in their respective regions, especially in Pekanbaru, Riau. In other words, the commitment of PT Pertamina Patra Niaga Fuel Terminal Sei Siak to developing the Semut Island ecotourism is one of the programs that contribute to restoring the economy after the pandemic.

Corporate Social Responsibility (CSR) is a form of corporate action that operates legally to contribute to and improve the quality of life of employees and their families, the local community, and the wider community (Nayenggita et al., 2019). CSR is regulated in Law Number 40 of 2007 concerning Limited Liability Companies, Law Number 25 of 2007 concerning Investment, and Regulation of the Minister of State for State-Owned Enterprises Number Per-5/MBU/2007 concerning SOE Partnership Programs with Small Businesses and Programs Environmental Development. This activity involves partnership responsibilities from various parties, such as the government, companies, and local communities that are active and dynamic. CSR is a business commitment to act ethically, operate legally and contribute to improving the quality of life of employees and their families, local communities, and the wider community. The concept of CSR involves partnership responsibilities between the government, companies, and local communities that are active and dynamic (Nayenggita et al., 2019).

To improve the quality of life and empower the community in its area, PT Pertamina Patra Niaga Fuel Terminal Sei Siak also carries out various program initiatives to solve problems that exist around the

company's operational areas and create sustainable development in the hope of creating outputs that are beneficial in terms of economy, environment, and environment, as well as sustainable community capacity building.

Community development is a community empowerment program organized to improve people's living conditions, increasing capabilities through integrity and sustainability (Rinaldy et al., 2017). Community development is closely related as an approach or one of the strategies in CSR.

PT Pertamina Patra Niaga Fuel Terminal Sei Siak has a community empowerment program by developing tourism areas with ecotourism principles on Ant Island. This program is an empowerment-based biodiversity program to create a green environment and become the center of community activities. It is also hoped that this environment will boost the development of community potential and creativity. In the long term, it is expected to create a green area that can be used for tourism for local and foreign tourists. This is considering the lack of natural concept tourist attractions in Pekanbaru.

Tourism is one of the development sectors that has received significant attention from the Pekanbaru City government. In line with policies at the national level, this sector is considered very potential for the development of the community and regional economy (Baskoro, 2016). Tourism development in an area is closely related to economic development goals (Haryanto, 2014). Meanwhile, another non-economic reason is that tourism creates a desire to maintain or maintain tourism assets owned by the area (Haryanto, 2014).

Semut Island is located at the mouth of the Pengambang River, which empties into the Siak River, while its upstream part is at Lake Bandar Khayangan. It was located in the middle of Pekanbaru City across the Siak River, where the area along the river has the potential to be developed into a tourist

attraction. The natural tourism object of Semut Island is a program built together by residents working together to become one of the tourist destinations in Pekanbaru City. Semut Island is getting serious attention to be empowered as a sustainable tourism village.

Based on the Pekanbaru City Regional Regulation Number 1 of 2021 concerning the Master Plan for Pekanbaru City Regional Tourism Development 2021-2036, the tourism development vision of Pekanbaru City is the realization of Pekanbaru City as a cultural center and urban tourism with Malay nuances, based on faith and piety. This vision is also followed by an aligned mission to make it happen.

Referring to the formulation of the vision and mission, the development of natural tourism objects on Semut Island is in line with the mission outlined in the regulation, including in line with a letter (d), which is to develop tourist destinations that are safe, comfortable, attractive, easy to achieve, and environmentally friendly. To increase regional and community income, the mission of letter (f) is to develop a tourism industry that is competitive, credible, able to drive business partnerships, and responsible for the preservation and balance of the natural and socio-cultural environment. In addition, considering that the initiators and activists of the development of this tourism object are the majority of the Malay tribal community, then at the development stage, it can be aligned with the mission of letter (a), which is to build tourism with Malay cultural nuances.

In line with the vision and mission that has been declared, the tourism development goals of Pekanbaru City based on Regional Regulation Number 1 of 2021 contain things that are in line with the development of natural tourism objects on Ant Island, namely in line with the objectives of the letter (a), namely carrying out the construction and development of attractions, amenities, and accessibility in tourism areas, then the

purpose of the letter (b), namely developing and preserving Malay culture as the basis for regional tourism development; and the purpose of the letter (c), namely to improve the quality and quantity of tourism destinations in the regions that can attract and increase the flow of foreign and domestic tourists, increase tourism sector PAD and community income, while maintaining environmental sustainability.

Based on article 17 of the regional regulation, East Rumbai District and West Rumbai District were merged into one area. The article also contains tourist destinations, including agrotourism, special interest sports tourism, water tourism, ecotourism, artificial tourism, and so on. Based on the tourist destinations' details, Ant Island's natural attractions can be included in the category of ecotourism destinations. In the context of community empowerment, this Semut Island natural tourism development initiative is thoroughly carried out by the residents of RW 7, Limbungan Village, East Rumbai District.

The Pekanbaru City, Culture and Tourism Office, has launched a work program for 2021, namely: (1) Development of city tourist attractions; (2) Development of city tourism destinations; (3) Procurement and maintenance of facilities and infrastructure in the management of urban tourism destinations; and (4) community empowerment in the management of city tourism destinations. Looking at the four programs of the Pekanbaru City Culture and Tourism Office in 2021, the development of the Semut Island natural tourism object is very appropriate and in line with these programs.

Referring to the general tourism policy framework contained in the Pekanbaru City Regional Regulation Number 1 of 2021 concerning the Pekanbaru City Regional Tourism Development Master Plan 2021-2036, the general planning of Pekanbaru City tourism development, and the work program of the Pekanbaru City Culture and Tourism Office in 2021, Therefore, the development of

natural tourism objects on Semut Island already has a strong base of policy support and is in line with the planning and work programs of the Pekanbaru City government.

Ecotourism is tourism that is responsible for preserving nature and culture and includes education (Ridlwan et al., 2017). Ecotourism does not run alone. For this reason, local community involvement is needed to manage so that ecotourism can provide economic benefits to the community and government (Ridlwan et al., 2017). The Semut Island Ecotourism Program is an empowerment-based biodiversity program to create a green environment and become the center of community activities in developing potential and creativity. The expected long-term impact is forming a green area that can be used as a tourist spot for tourists from outside the region and local tourists. There are still few tourist attractions with natural concepts in Pekanbaru City.

Community-based ecotourism is an effort to develop villages through the tourism sector; local communities play an active role in ecotourism development so that ecotourism areas not only offer natural tourism but also contribute to environmental and cultural conservation. Ecotourism areas are proclaimed to have a natural and beneficial environment for the local community, an educational environment, and tourist satisfaction. This program is also an educational tour for tourists by understanding the culture and history of the area so that awareness is expected to grow to participate in protecting the environment.

## **METHOD**

This study uses a qualitative method with a descriptive type. This approach was chosen to collect data qualitatively and gain an in-depth understanding (Sugiyono, 2015). Qualitative research aims to understand existing phenomena. Descriptive research is used to explain the research objectively (Moleong, 2017). Data collection techniques in this study used documentation studies and

in-depth interviews with various informants, which were then analyzed to obtain an overview of the ecotourism program on Semut Island.

## RESULTS AND DISCUSSION

### A. Implementation of the Semut Island Ecotourism Program

The Semut Island Ecotourism Program began with the delivery of education to broaden the group's knowledge in tourism management and good area management for reforestation. There are 25 registered beneficiaries of the Greening Program. Most beneficiaries' occupations are fishermen, traders, and laborers. They consist of young people, adults, and tourism managers on Pulau Semut. This reforestation program empowers the community to create a green environment and become the center of community activities in developing potential and creativity. The expected long-term impact is forming a green area that can be utilized. Reforestation education is delivered at least once in implementing the tourism management program and education of mangrove nurseries in the vicinity of the program location. The Greening Program Socialization activity was attended by Group Members, the Limbungan Village Head, Program Implementers from the Human Initiative, representatives from PT Pertamina Fuel Terminal Sei Siak, Unilak Forestry Experts, and the Chair of the Tourism Awareness Group (POKDARWIS).

Education for beneficiaries or groups was then given with a focus on the material, Tourism Place Management, delivered by Mr. Genta from the Pekanbaru City Culture and Tourism Office at Saung Edukasi, Semut Island. In addition, there was also a Sharing Session from the Manager of Okura Flower Park, Mr. Muslim, as an encouragement for groups to start activities in the field of ecotourism.



**Figure 1. Tourist Attractions Management Training**



**Figure 2. Lunch with the Deputy Mayor of Pekanbaru at Saung Edukasi**

In addition to providing education related to tourism management and reforestation activities for tourism groups, the next stage is tree planting activities which are icons of reforestation activities so that apart from educating the public, it also shows the sustainability of reforestation activities. The tree planting began with a ceremony attended by the Deputy Mayor of Pekanbaru and invited by other stakeholders along with the Beneficiary Group. A total of 350 ketapang trees will be planted by the group. Furthermore, tree planting was carried out several times during the program due to many tree seedlings being planted. The activity lasted for one week, was carried out by groups and communities, and involved Unilak Forestry Students and Riau HIVE Volunteers.



**Figure 3. Ceremonial Seeds Planting Seeds**



**Figure 4. Planting by Students**

Planting trees and fruit follows the site plan made by the expert. 350 Ketapang Kencana trees, 1,700 fruit trees, and 1,000 Rhizophora were planted along the riverbank. In addition to procuring seeds, it is also necessary to procure tools that support plantings, such as hoes, carts, tembilang, and boots. In addition to the planting of the Ketapang Kencana tree, there were 1,700 tree and fruit trees that were held. A total of 1,000 Rhizophora were planted on the banks of the river. This activity was carried out starting from September 15, 2021, namely an experimental planting of 100 stems, and on October 9, 2021, the planting of 900 stems was carried out by involving various stakeholders such as the Belukap Mangrove Club (BMC) Faculty of Fisheries and Maritime Affairs, University of Riau, BEM, Faculty of Forestry, University of Lancang Kuning, Human Initiative Volunteer Energy (HIVE) and students from various campuses in Pekanbaru.

This area is a recommendation from the local government as a location that can be used for the Semut Island Ecotourism Development Program to form a green environment with economic value. The Limbungan Village Party gave this area a recommendation, which also has a program to establish a tourist village. In addition to planting plants around Ant Island, this program also builds educational shelters that aim to make the huts a place for educating the public and visitors. The construction of an educational booth is also expected to be a means and a place to gather both in training activities and meetings for groups with *stakeholders* or resource persons during training or meetings. In addition, it is also intended for visitors who can participate in both environmental and ecotourism educational activities. The making of this Educational Saung is also based on the Semut Island Site Plan, which was designed at the beginning to form a good layout. Work on this Saung begins on Friday, October 22, 2021, with the size of the Saung approximately 5 x 7 meters, one piece right on Semut Island.



**Figure 5. Ant Island Site Plan**

To support the Semut Island Tourism Village, a gate was also built, which is located

right at the entrance to Ant Island as directions to Ant Island Ecotourism. A connecting bridge to Ant Island was also built as a supporting facility. The following is the documentation of the activities:



**Figure 6. The realization of the Semut Island Ecotourism Gate**



**Figure 7. The Semut Island Ecotourism Bridge**

## **B. Types of Plants and Sustainable Economic Potential in Ecotourism Programs**

The planting of various types of trees has been carried out by various stakeholders, name beneficiaries, communities, students, and volunteers; it takes approximately one month to plant a total of 2,700 trees. The types of trees planted are:

### **1) Mangrove Trees**

The planting of 1000 mangroves was carried out along the banks of the floating river and around Semut Island. The mangrove forest ecosystem has many benefits. These benefits are usually categorized into groups of ecological, biological, and economic benefits. [Qiptiyah, Halidah, and Rakhman \(2008\)](#) in East Sinjai, South Sulawesi, the community used the wood, fruit, leaves, and roots of mangroves. In addition to direct benefits, mangroves also produce indirect benefits, namely as a barrier to abrasion and increasing fish and shrimp production.

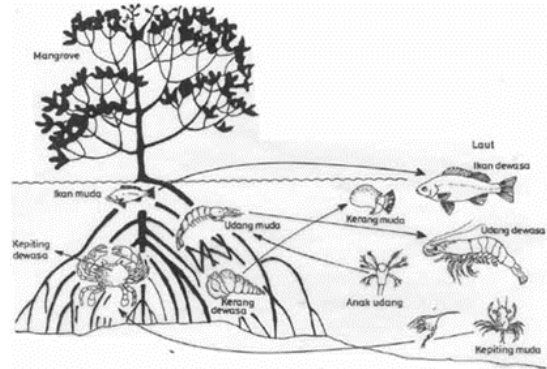


These benefits can be grouped into ecological, biological, and economic benefits (Asman et al., 2020; Karuniastuti, 2013). The ecological benefits of mangrove trees are as a barrier to coastal abrasion, as a windbreak, reducing CO<sub>2</sub> levels in the air, and as anchoring pollutants in the waters. Meanwhile, it is biological benefits as a place for aquatic biota to live for shelter, foraging for food, spawning, and caregiving, as a source of food for species around it, as well as a place to live for various animals, such as monkeys, reptiles, and birds. The economic benefits obtained from planting mangroves are a place for tourism, a source of wood for building and firewood, a producer of food and medicine, and increasing the production of fish, shrimp, etc.

Other economic benefits arising from planting mangroves to support the development of Semut Island tourism objects are the beauty, uniqueness, and coolness offered by the presence of mangrove plants. The unique characteristics of these mangroves have a selling point in complementing the attractiveness of tourism objects on Ant Island. The uniqueness of the high root structure, leaf stems, distinctive and beautiful fruit, and mangrove tree stands that grow tightly in their habitat add to the value of beauty, coolness, and comfort. as well as the presence of fauna species associated with mangrove ecosystems such as birds, monkeys, various types of reptiles, honey bees, and others.

Mangrove forests are one of the places for spawning and developing fish and shrimp. The existence of mangrove forests is closely related to the survival of aquatic biota, especially fish and shrimp. Increasing the number of mangrove stands planted on the

Semut Island area's riverbanks can increase the number of fish and shrimp that fishermen can catch in Pengambang Village. Thus the existence of mangrove forests will impact increasing people's income.



**Figure 8. Mangrove Plants and Aquatic Biota**

## 2) Ketapang Kencana Tree

The most prominent benefit of Ketapang Kencana is as an ornamental or aesthetic plant. Ketapang Kencana also functions as a shade from the sun, so it can protect tourists who are visiting from the sun. The leaves and bark of the ketapang tree can be used as black dye and ink. Ketapang leaves also have the benefit of neutralizing the water's PH, which can be one of the reasons why fish prefer to live around waters overgrown with ketapang trees. The maintenance of aquatic ecosystems can increase fish commodities as food and as one of the natural tourism sectors that can improve the economic livelihoods of residents.

## 3) Mahogany Trees

The primary purpose of planting Mahogany trees (*Swietenia macrophylla*) at the location of the Semut Island ecotourism object is to increase the number of existing protective trees. In addition, because the tree is tall, the wood is solid and



hard, and it is planned that later it will be a place for making tree houses and bridges between tree canopies (canopy bridges). The existence of tree houses and bridges between tree canopies is expected to be one of the ecotourism attractions of Ant Island.

Another benefit of the Mahogany tree is that it reduces air pollution. Like mangroves, Ketapang Kencana, and other plant species, Mahogany trees can also play a role in carbon dioxide absorption and storage.

#### 4) Fruit Trees

The primary purpose of planting this fruit tree is to produce its fruit. The types of fruit trees planted in the ecotourism location of Semut Island are Matoa (*Pometia pinnata*) and Jackfruit (*Artocarpus heterophyllus*). The Minister of Agriculture of the Republic of Indonesia, through SK Number 160 of 2006, has determined the Matoa tree as a superior fruit variety recommended for cultivation. Distinctive flavors such as a mixture of flavors of longan, rambutan, and durian (Faustina & Santoso, 2014).

Likewise with the Jackfruit tree. Jackfruit is one of the tree species that

get priority to be developed in the Multipurpose Tree Species Development Program (JPSG). The fruit of the jackfruit tree tastes good and can be sold to tourists. Jackfruit can also be processed into various products, ranging from jackfruit chips, sweets, and warm vegetables, to young jackfruit rendang, to support the acceleration and promotion of Ant Island Ecotourism.

#### C. Impact of the Semut Island Ecotourism Village Program

The impact of the Ecotourism Village program on beneficiaries can be seen by the achievement *goal*, which is the primary reference: "Creating a green environment and becoming the center of community activities in developing potential and creativity". One way to measure the impact that can be done when referring to the program design is through a survey to find out the conditions before the intervention, the conditions after the intervention, and the expected conditions in the future. FGDs have been carried out together with the Beneficiaries and Stakeholders. The results of the FGD can be seen in table 1 below.

**Table 1**  
**Evaluation and Impact**

Condition	Before Intervention	After Intervention	Conditions for the Next 1-5 Years
Material	<ul style="list-style-type: none"> <li>Do not aware of Green Environment</li> <li>Have no experience managing ecotourism</li> </ul>	<ul style="list-style-type: none"> <li>Gain knowledge about management tourism</li> <li>Sufficiently understand business management</li> </ul>	<ul style="list-style-type: none"> <li>Opening of new job opportunities</li> <li>Have income from Ant Island ecotourism</li> <li>Become an icon of Pekanbaru City's natural tourism</li> </ul>
Spiritual	<ul style="list-style-type: none"> <li>There is no motivation to develop the area into a tourism</li> </ul>	<ul style="list-style-type: none"> <li>Have a sense of care for environment</li> <li>More enthusiastic about running business</li> </ul>	Semut Island Group has an ecotourism business
Social	<ul style="list-style-type: none"> <li>No networking</li> <li>There is no forum or meeting with other business actors.</li> <li>No community</li> </ul>	<ul style="list-style-type: none"> <li>Increase networking</li> <li>There are meetings with other business actors.</li> <li>There is already a community</li> </ul>	<ul style="list-style-type: none"> <li>More acquaintances or partners</li> <li>Establishment of MSMEs Participates in entrepreneurship</li> </ul>

Condition	Before Intervention	After Intervention	Conditions for the Next 1-5 Years
	organizational structure	organizational structure in the field of ecotourism.	seminars.

Source: Final Greening Report

Based on Table 1, it can be seen that there are changes in social, spiritual, and social aspects that occur in the beneficiaries of the Semut Island Ecotourism Village program. In terms of materials, residents who initially did not have knowledge and experience in the environment and ecotourism became aware of and understood business management and tourism management. There was an increase in motivation, enthusiasm, concern for the environment, and efforts in the spiritual aspect. Meanwhile, in the social aspect, the network is expanding in terms of ecotourism management.

### CONCLUSION

The ecotourism-based empowerment program can contribute to environmental conservation, which has an impact on increasing fish, shrimp, and other biota commodities for food supplies as well as being an attraction for Semut Island tourists who will generate sustainable economic benefits. From a social perspective, the Tourism Village program provides Saung as a gathering place to increase citizens' capacity. PT Pertamina Patra Niaga Fuel Terminal Sei Siak will monitor and supervise the sustainability of the program and biodiversity on Ant Island. This activity also makes groups and communities participate in preserving and developing this area into a tourist location for the surrounding community and migrants from outside the region. This community empowerment invites all stakeholders to work together and back to the natural ecosystem through tree planting for a sustainable ecosystem. This is one of the embodiments of the pillars of Corporate Social and Environmental Responsibility.

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