

# The Future of Fishermen’s Lives: Does it Rely on Inclusive Social Policies to Support Sustainable Societies?

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Article Info	Abstract
<p><b>Keywords:</b> fishermen; gold mining; inclusive social policies; sustainable society</p> <hr/> <p><b>Article history:</b> <b>Received</b> 16 September 2024 <b>Revised</b> 20 October 2024 <b>Accepted</b> 16 December 2024 <b>Published</b> 31 December 2024</p>	<p>Fishermen are often described as people whose lives depend on nature. Since the emergence of gold mines in Pancer, fishermen have had difficulty finding fish. In many cases, the presence of mines in other regions has caused environmental damage. However, there have been no scientific studies that show significant environmental damage due to gold mines in Pancer. This study aims to analyze the lives of fishermen in Pancer after the emergence of gold mines and analyze whether a sustainable society has been realized. The concept of deep ecology is used by researchers to analyze the case. The study uses a qualitative method with a case study approach. Data were obtained from the field using observation and interviews, as well as field documentation, including literature studies to support research data. The research was conducted in Pancer Hamlet, especially at Pancer Beach and Pulau Merah Beach. At Pancer Beach, fishermen began to have difficulty finding fish in coastal areas, so they had to sail far to get fish. This caused a decrease in the income of fishermen at Pancer Beach. Meanwhile, at Pulau Merah Beach, the community developed the beach as a tourist destination. Some fishermen switched professions to become traders around the beach or rent boats to tourists. The Pancer community as a sustainable society can be seen from waste management to protect the coastal environment. Support for inclusive social policies from the government is by making various regulations and waste management activities that involve the local society, community groups, stakeholders, including the younger generation. A sustainable society is in line with the concept of deep ecology because it prioritizes the nature sustainability for the sustainability of human life.</p>

## Introduction

Fishermen are vulnerable to poverty because their income depends on environmental conditions. According to [FAO \(2022\)](#), fishermen are vulnerable to economic shocks because their income depends on the environment (season, weather, and prone to accidents at sea)

and vulnerable to political shocks (conflicts over control, access, and use of natural resources, especially unfair governance). In addition to these external factors, fishermen's poverty is also caused by internal factors, that are low levels of education and information (Primyastanto *et al.*, 2010; Pinto, 2015; Kyvelou *et al.*, 2019) and the aging of fishermen (Kyvelou *et al.*, 2019).

If the lives of fishermen depend on the environment, then the environment becomes something that needs more attention. Coastal environmental damage can occur due to natural and non-natural factors. For example, in Sawai Bay, Maluku, the use of bombs or explosives and the use of toxic materials to catch fish, as well as coral mining activities, are non-natural factors that damage the environment. At Tambakrejo Beach, Blitar, coastal damage is caused by natural factors, to be specific accumulation of tree branch waste during the rainy season, as well as non-natural factors, specifically the use of compressor fishing gear, sand dredging, and the construction of ports near fish landing bases (Primyastanto *et al.*, 2010). At Kuwaru Beach, Bantul, coastal damage is caused by non-natural factors, that are the opening of shrimp ponds (Pinto, 2015). At Tamilouw Beach, Central Maluku, conventional gold mining and inadequate waste management systems cause mercury to pollute water sources and soil, then into rivers and end up in the sea (Pattimahu *et al.*, 2021). In coastal areas of Ecuador, gold mining also causes the surrounding environment to be polluted with mercury (Mestanza-Ramón *et al.*, 2024).

In Dusun Pancer, a gold mine has been established in the coastal area. Although gold mining can positively increase community income (Salim *et al.*, 2021), gold mining also has negative impacts, especially related to environmental damage (Pattimahu *et al.*, 2021; Mestanza-Ramón *et al.*, 2024). The presence of a gold mine in Pancer Hamlet has caused pros and cons in the community. Demonstrations were carried out because the community rejected the gold mine, which had the potential to pollute the environment (Hakim, 2015). After the gold mining company exploited gold on Mount Tumpang Pitu, in Pancer Hamlet, in 2016 there was a mud flood, and fishermen suspected that the mud came from gold mining activities in Tumpang Pitu (Setyawan, 2018). The mud that covered the coral in the coastal area disrupted the fish habitat, and this caused a decrease in the number of fish and shellfish caught by fishermen.

We cannot deny that capitalism exploits nature for the supply of industrial raw materials for the welfare of mankind, and therefore nature must be preserved to ensure the supply of industrial raw materials (Samekto, 2008). What often happens is that lower-middle class countries become resource suppliers for developed countries, and this causes environmental destruction (Magdoff and Foster, 2018). The Tumpang Pitu gold mine in Pancer certainly has positive benefits, such as being able to guarantee the need for gold in the market, increase state tax revenues, and absorb labor from the surrounding area. However, reflecting on mining cases in various regions, negative impacts will definitely also occur, such as environmental damage that is starting to be felt by the surrounding community, especially fishermen in Pancer.

Arne Naess (1973) introduced the concept of deep ecology by considering humans as a cancer that eats away at the earth's resources, causing environmental damage. Deep

ecology pays attention to all ecological communities, both biotic and abiotic. Awareness of deep ecology makes humans see nature not as a resource for exploitation but as a partner of life. If in the concept of anthropocentrism humans dominate nature, then deep ecology applies the principle of non-anthropocentrism, to be specific ecocentrism, where human domination over nature is replaced by human dependence on nature.

SDGs indicators are 1) no poverty, 2) zero hunger, 3) good health and well-being, 4) quality education, 5) gender equality, 6) clean water and sanitation, 7) affordable and clean energy, 8) decent work and economic growth, 9) industry, innovation, and infrastructure, 10) reduce inequalities, 11) sustainable cities and communities, 12) responsible consumption and production, 13) climate action, 14) life below water, 15) life on land, 16) peace, justice, and strong institutions, and 17) partnerships for the goals. Recite from the [SDGs Knowledge Hub \(2024\)](#), based on the Global Sustainable Development Report released by the United Nations, in 2019, Indonesia was in 102<sup>nd</sup> position and in 2023 rose to 75<sup>th</sup> position in the world. Indonesia is also one of the countries with the most progressive achievement of the TPB/SDGs targets among upper middle-income countries.

SDGs are in line with the concept of deep ecology. The achievement of SDGs aims to achieve a sustainable society and a better life. The role of the government as a party that makes policies is certainly needed to support a sustainable society ([Imayanti et al., 2023](#)). This study aims to analyze the lives of fishermen in Pancer Hamlet after the emergence of gold mining and to analyze the sustainable society in Pancer Hamlet.

## Research Method

This study uses a qualitative research method with a case study approach. The selection of the case study approach aims to describe the case that occurred and analyze it with theory. The research location is in Sumberagung Village, Banyuwangi, with a focus on two coastal locations in Pancer Hamlet, specifically Pulau Merah Beach and Pancer Beach. This study does not compare the conditions of the two beaches significantly, but the researcher wants to describe the condition of the community, especially the fishermen. Pancer Hamlet was chosen as the research location because there is a case there, namely the community, to be specific the fishermen, are the most affected by gold mining activities in the southern coastal area.

The research informants are fishermen, community groups, and people who understand the conditions of Pancer Hamlet. Data collection techniques through observation, interviews, and documentation. Observations were carried out by researchers by coming to Pancer Hamlet to observe the behavior and activities of individuals at the research location ([Creswell, 2017](#)). The position of the researcher when conducting observations is only as an observer, so the researcher asks permission from the informant before conducting observations. Interviews were conducted naturally in the environment where the informant usually does activities and were carried out with or without making an appointment with the informant. Documentation is done by collecting and analyzing various documents such as books, research journals, government data, mass media articles, and so on.

The data that has been obtained is tested for validity by cross-checking the data with triangulation techniques. Researchers compare data obtained from observations, interviews, and documentation. After the data is proven valid, the next step is data analysis. Data analysis uses an interactive model from [Miles and Huberman \(1992\)](#), which includes 1) collecting research data, 2) data reduction by selecting and sorting the data needed, 3) presenting data in the form of narrative text, and 4) drawing conclusions/verification.

## Results and Discussions

### Research Location Overview

The research location is located in Pancer Hamlet, Sumberagung Village, Pesanggaran District, Banyuwangi Regency, Indonesia. According to data from the [Village Information System \(2024\)](#), the total population of Sumberagung Village in 2023 was 13,408 people. In 2023, the SDG's score of Sumberagung Village was 65.82. Sumberagung Village has an area of 103.05 km<sup>2</sup> ([BPS-Statistics of Banyuwangi Regency, 2023](#)). To the south, Sumberagung Village borders directly on the Indian Ocean. Therefore, on the south coast, many people work as fishermen. Sumberagung Village consists of four hamlets, to be specific Pancer Hamlet, Rejoagung Hamlet, Silirbaru Hamlet, and Sungailembu Hamlet. In Pancer Hamlet there are several beaches, but this study focuses on two areas, specifically Pancer Beach and Pulau Merah Beach because both beaches are located close to the gold mining area on Mount Tumpang Pitu.



**Figure 1.** Pancer Beach Pier is adjacent to the mining location  
(Source: author's documentation)

In Figure 1, deforestation is seen on Mount Tumpang Pitu due to gold mining activities. The mining location is 3 km from residential areas and the location of the mining waste retention pond is 6.7 km from the Pancer fish market ([Setyawan, 2024](#)).



## Fishermen's Life in Pancer Hamlet After the Emergence of Gold Mining



**Figure 2.** Fishing boats and fish market at Pancer Beach  
(Source: author's documentation)

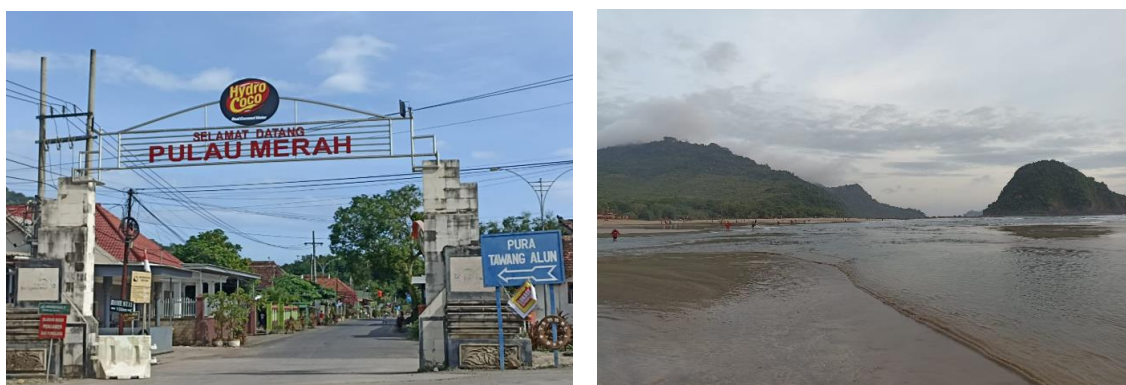
The majority of the population on the coast of Pancer Beach are small fishermen whose income is not fixed, because their capital is limited, they still use boats with simple technology, and fishing activities depend on the weather (Suprpto, 2012). In Figure 2, the fishing boats have a capacity of around 5-10 GT (Gross Ton). Meanwhile, there are only a few large boats that can accommodate >10 GT. The types of fish that are usually caught by fishermen are tuna, skipjack, grouper, squid, and so on. In Pancer Hamlet there is a fish market (see Figure 2). However, not all fishermen bring their catch to the fish market because usually there are already peddlers who buy the fishermen's catch.

Before the gold mine, fishermen could sail in coastal areas and get a lot of fish. However, after the mine, sedimentation occurred in coastal areas so that fish habitats were disturbed. Fishermen need hours of sailing to catch fish, even then the fish catch is much reduced compared to before the gold mine. Further the distance traveled and the longer the fishermen go to sea, of course, the more fuel is needed for the boat. Of course, this causes fishermen's income to decline. Farmers are also affected by the presence of gold mining companies, but the impact is not direct. For example, dragon fruit farmers whose land is adjacent to the mining site are also affected by mud floods.

However, behind that, the surrounding community also gets a positive impact from the gold mine. Many people, especially young people, are now working in gold mines. The CSR of gold mining companies develops programs in the infrastructure sector such as building village roads including streetlights, building worship facilities, renovating uninhabitable houses, empowering MSMEs, and so on. So, it can be said that mining companies also make a positive contribution to the surrounding community.

According to the results of interviews with fishermen, there is indeed CSR assistance from gold mining companies. However, the welfare provided to the community must be right on target. Gold mining companies certainly get a lot of profit, but there is no direct contribution to the affected community, especially fishermen. According to fishermen, waste from gold mines disrupts the ecosystem in coastal areas. This causes fishermen who usually can go to sea around the coast to no longer get fish and have to go to sea for miles first to get fish. But more than that, fishermen are people whose lives depend directly on the sea. Going to sea is a way of life for fishermen. If the environment is damaged, then the fishermen's story is over. Although fishermen can change professions, of course not all

fishermen can do it. If they change professions, of course their lives will not be the same anymore.



**Figure 3.** Entrance gate and tourist destination of Pulau Merah Beach  
(Source: author's documentation)

Unlike Pancer Beach, which is famous for producing fish and has a fish market, Pulau Merah Beach was developed into a tourist destination. Initially, Pulau Merah Beach (in Figure 3) was just an ordinary beach that was not crowded with visitors. On Pulau Merah Beach, there is Pulau Merah Hill which is the icon of the beach. Then, community groups in the surrounding area began to clean up the trash around the beach and develop the beach as a tourist spot. Various tourist activities that can be done include sunbathing, playing in the sand on the beach, surfing, going around by boat, exploring Pulau Merah Hill, enjoying the sunset, and various other activities. Pulau Merah Beach became even more famous after an international surfing competition was held in 2013.

In 2016, there was a mud flood on Pulau Merah Beach. Deforestation on Mount Tumpang Pitu for gold mining is suspected to be the cause of the mud flood, the impact of which reached 3-4 km out to sea (Rachmawati, 2016). The flood inundated the houses of residents around the mine, especially the houses of shellfish seekers (Sari *et al.*, 2023). Fishermen and shellfish seekers have difficulty finding fish and shellfish because the impact of mud causes sedimentation and kills marine biota (Rachmawati, 2016; Sari *et al.*, 2023).

Although it is suspected of damaging the environment, the presence of a gold mining company has contributed to building rural roads, making it easier for tourists to access Pulau Merah Beach. The village government and community groups play an active role in the development of Pulau Merah Beach, and there is a role for the mass media in branding (Wiprestika *et al.*, 2020). In the coastal area of Pulau Merah Beach, there are many culinary businesses and homestays. Both ordinary residents, homestay owners, culinary entrepreneurs, and traders on the beach are required to pay a fee to collect waste. There is a special place to manage recyclable waste. The community also carries out routine activities to clean the beach area including the area around the residents' settlements. Environmental cleanliness certainly supports tourism.

In Figure 3 also shows directions to Tawang Alun Temple. The temple is a place of worship for Hindus. Every year Hindus hold a Melasti ceremony at Tawang Alun Temple. Hindus from Pesanggaran District carry out rituals at the temple and purify themselves on

the beach (in Figure 4) (Wardani, 2024). During the ceremony, Hindus and the community also clean the surrounding area. The existence of this ceremony also attracts the interest of tourists.



**Figure 4.** Melasti Ceremony at Pulau Merah Beach  
(Source: Wardani, 2024)

The number of fishermen on Pulau Merah Beach is not as many as fishermen on Pancer Beach. This is mainly because Pulau Merah Beach has been developed into a tourism area. Many boats are also rented to tourists to sail in the surrounding waters. The majority of people work in tourism, such as renting houses for homestays, becoming culinary entrepreneurs around the beach, selling souvenirs, and so on. Quite a lot of people also work in gold mining. In addition, people also work as farmers. Some grow food crops, some grow horticulture such as dragon fruit.

### **Inclusive Social Policies to Support Sustainable Society**

In the past, environmental change was slow, so there was plenty of time to respond. While now, the dynamics of technology, economy, and population accelerate the rate of environmental and social change, so there is not enough time to respond (Siddiqui, 2018). According to Weiss (in Samekto, 2008) there are three actions of past and present generations that are detrimental to future generations, specifically excessive consumption, excessive use of natural resources, and exhaustion of natural resources. Capitalism makes the relationship between humans and nature increasingly disappear (Magdoff and Foster, 2018). This kind of behavior is contrary to the concept of deep ecology from Arne Naess.

Talking about the coastal environment, of course, it is not only limited to the physical natural environment. Humans are an inseparable part of the coastal environment because humans live in coastal areas, humans earn a living from natural resources there (Suprpto, 2012), humans are parties that can damage nature (Primyastanto *et al.*, 2010; Ayal *et al.*, 2021), and humans are also part of the solution to coastal conservation. Community involvement is very important to overcome environmental problems (Imayanti *et al.*, 2023).

There are various ways that can be done to maintain the coastal environment so that it is always sustainable. Some ways are regular awareness (Ayal *et al.*, 2021) which can be done through education (Primyastanto *et al.*, 2010); strengthening supervision of destructive fishing activities; strengthening the legal basis in handling destructive fishing activities; and

revitalizing state regulations related to the prevention of destructive fishing activities (Ayal *et al.*, 2021). Of course, these various methods require cooperation between the government and the local community (Primyastanto *et al.*, 2010). This is where the role of the government in forming inclusive social policies, including their implementation and supervision, is needed to support a sustainable society (Imayanti *et al.*, 2023).

In Pancer Hamlet, fishermen complain that lobsters are now difficult to get, even though lobster fishing is actually an illegal act. There are already government regulations, namely the Regulation of the Minister of Maritime Affairs and Fisheries of the Republic of Indonesia No. 56/PERMEN-KP/2016 concerning the Prohibition of Catching and/or Exporting Lobster and Crab from the Territory of the Republic of Indonesia (JDIH BPK, 2016). Of course, when creating inclusive social policies, the government needs to protect local fishing and fisheries communities (Jönsson, 2019). However, if fishermen commit illegal acts, of course, they need to be followed up. Furthermore, the reduction in lobsters in coastal areas can indicate a reduction in lobsters due to illegal fishing or because the coastal environment has begun to deteriorate.

In addition to natural sciences, social sciences also offer methods for studying nature from a social dimension (McKinley *et al.*, 2020). The findings of Febrian *et al.* (2022) research, show the results of the Blue Ocean Strategy analysis using a four-step framework in Sumberagung Village for the development of coastal tourism to be specific 1) eliminate the habit of littering, 2) reduce inadequate facilities, 3) raise waste management systems, spatial planning, and others, and 4) create reforestation, create village tourism management institutions, and others. At first glance, it seems that the main goal is tourism development, but the activities carried out can contribute to environmental conservation. EcoRanger, an empowerment program from the Greeneration Foundation, which has been established since 2018 in Sumberagung Village, has successfully implemented the Fishing for Litter Project in Pancer Hamlet involving 61 fishermen and has succeeded in reducing 13.5 tons of marine waste and around the coast (Ecoranger Indonesia, 2023). Waste with economic value will be reprocessed, while waste without economic value will be sent to the Banyuwangi Final Disposal Site. The Fishing for Litter project is an inclusive activity that not only involves the government and the community, but also educates high school students, college students, and fishing communities about waste management.

In 2022, the Ministry of Marine Affairs and Fisheries initiated an independent “Clean Coastal Village Program” in Pancer Hamlet as a pilot project to solve the problem of marine waste (Sains Indonesia, 2022). The parties involved include the Ministry of Marine Affairs and Fisheries, local governments, business actors, fishermen groups, and environmental activists Ecoranger. In addition to creating a waste management roadmap, assistance for waste management facilities and infrastructure was also provided to the *Kelompok Usaha Bersama* (KUB) *Bhina Karya*. KUB is a community forum that has the same vision and mission to improve the welfare of its members.

The government has made various regulations to protect the sea. The role of the government is to encourage social inclusion in overcoming environmental pollution as a form of government participation in environmental pollution (Imayanti *et al.*, 2023). As



Siddiqui (2018) said, “a sustainable society is one that ensures the health and vitality of human life and culture’s and of nature’s capital for present and future generations”. Inclusive is positioning ourselves in the same position (equal) with other people or other groups so that it encourages us to try to understand the perspective of other people or other groups in seeing and solving a problem (SDGs Knowledge Hub, 2024). The implementation of inclusive social policies needs to get support from various levels of society and various generations. Participatory inclusive means that all parties must be involved in the team.

Referring to Mustalahti *et al.* (2023), people of all ages can share knowledge for the welfare of the younger generation in the future and the sustainability of the environment in the future. In the traditional idea, the younger generation learns from the older generation. However, in fact the older generation can also learn from the younger generation, so that the younger generation can also play a role as an actor in developing a sustainable society.

The Pancer Hamlet community is a sustainable society. The community demonstrated because gold mining was considered to damage the environment. Since the beginning, the community has tried to clean up marine debris and garbage in coastal areas. Hindus who perform religious ceremonies also try to protect the environment. The community together with the government, community groups, business actors, and other stakeholders work together to manage waste. Education about waste management also targets the younger generation. Based on the various efforts that have been made, it appears that the Pancer Hamlet community is a sustainable society. The realization of a sustainable society here certainly requires inclusive social policies to support the sustainability of the lives of fishermen in particular and the lives of coastal communities in general. Sustainable society is in accordance with the concept of deep ecology because it shows that society considers nature as a partner of life that must be maintained for the sustainability of life in the future.

## Conclusions

The lives of the Pancer Hamlet community have changed since the establishment of a gold mining company in Pancer Hamlet. Many people on Pancer Beach still survive as fishermen despite the difficulty in finding fish. Meanwhile, the number of fishermen on Pulau Merah Beach is not that many, because the beach is developed as a tourist destination. There is no doubt that the Pancer Hamlet community is a sustainable society. Activities that refer to a sustainable society that receive support from inclusive social policies from the government, especially in the field of waste management.

In general, literature studies show that gold mining can improve people’s welfare on the one hand, but on the other hand can damage the environment. However, there has been no scientific study on the environmental damage caused by gold mining on Mount Tumpang Pitu, Pancer. Therefore, this study is limited to discussing the lives of fishermen after the emergence of gold mining and sustainable society in Pancer Hamlet. There needs to be a more in-depth study in the field of natural sciences regarding the impact of gold mining on the environment in Pancer Hamlet. This study also opens up opportunities for research in the field of social sciences regarding the lives of fishermen more specifically,

waste management systems, and sustainable society in Pancer Hamlet seen from various sides.

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