

The Impact of Baron Fishermen's Activities on the Socio-Economic Life of Kemadang Village Residents, 2011-2017

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Abstract

This study examines the impact of fishing activities on Baron Beach on the socioeconomic conditions of the residents of Kemadang Village from 2011 to 2017. Using historical methods, this study analyzes how the transition from land-based agriculture to fishing has affected income, welfare, and infrastructure development in the region. The results show that the abundant fish production at Baron Beach has significantly increased fishermen's income, who now earn 2-3 times a week compared to the twice-a-year income from agriculture. This income increase has directly improved living standards, such as increased ownership of goods, access to higher education for fishermen's children, and improved housing quality from semi-permanent to permanent structures. Fishing activities have also driven improvements in facilities and infrastructure, including the construction of a lighthouse, renovation of the fish auction building, relocation of vendors, and an increase in the number of boats from 51 to 55 units. This study highlights the socio-economic transformation brought about by the shift to fishing as the primary livelihood in Kemadang Village.

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Introduction

Baron Beach is a beach located in Kemadang Village, Tanjungsari District, Gunungkidul Regency, Special Region of Yogyakarta (DIY). The Baron Beach destination can be reached in about one to two hours from downtown Yogyakarta, a distance of 57.3 km (Salsabila et al 2024, 14). Before it was a tourist destination village, this area was an agrarian settlement that depended on dry land. Limitations in agricultural resources, government policies, and environmental changes over the last two decades of the 20th century compelled the people of Kemadang Village to adapt, particularly by shifting their primary livelihoods, to ensure the sustainability of their local economic and social lives. This transition is characterized by most of the population moving from the agricultural sector to the maritime sector.

Since the 1980s, coastal communities in Gunungkidul, particularly those around Baron Beach, began transitioning their livelihoods from dry land farmers to fishermen. This transition was prompted by the limitations of dry land, which was less than optimal for agriculture (Suadi 2002, 7). In 1970, the Green Revolution program was implemented in Gunungkidul to increase food production. The Green Revolution was a modernization movement in agriculture designed to increase food production and was intensively implemented by the New Order government from the 1960s to the 1980s (Gultom et al

2021, 146; Azahra et al 2024, 3). Although the Green Revolution succeeded in boosting rice production, on the other hand, it resulted in unequal distribution of profits, which affected the socio-economic lives of rural communities.

One of the consequences of these socio-economic disparities due to the Green Revolution in Gunungkidul was experienced by the people of Kemadang Village. As a means of adaptation for survival, the people of Kemadang Village transitioned their occupations from dry land farmers to fishermen (Kandar 2014, 47). Although capture fisheries activities were still relatively new for southern coastal communities of the Special Region of Yogyakarta (DIY), fishing activities at Baron Beach became pioneers and spurred the development of catch fisheries across the beaches of DIY. The livelihoods of dry land farmers and fishermen were not entirely abandoned; instead, both coexisted. During the fishing season, fishermen conducted fishing activities at sea, and when the fish were scarce, they would return to farming the land.

The shift in livelihood of Kemadang Village residents from dry land farmers to fishermen has had a positive impact on the village's economic level, which has continued to improve. Previously, the community relied solely on income from two annual harvests from agriculture. However, after becoming fishermen, people could earn income two to three times a week from fish catches. In addition, this shift in livelihood also changed the community's consumption patterns, which previously only involved agricultural products and now included fish (Interview with Sumardi, 2021). Overall, the improvement in the economy and the more varied consumption patterns have enhanced the quality of life for the people of Kemadang Village as a whole. This is further supported by new opportunities in the fisheries sector and associated industries, which are increasingly promising for future development.

Based on this background, the focus of this research is to analyze the impact of Baron fishermen's activities on the socio-economic life of the residents of Kemadang Village. This study is formulated through three research questions as follows. First, how has the income of Kemadang Village residents increased after becoming fishermen? Second, can the lives of Kemadang Village residents be classified as prosperous after transitioning to fishermen? Third, do the activities of Baron fishermen influence the facilities and infrastructure at Baron Beach?

Method

The method used to compile this research is the historical method. The historical method involves research steps as a process to examine and analyze records and relics of the past (Gottschalk 1983, 32). The historical method includes four stages: (1) the collection of historical sources or heuristics; (2) internal and external criticism; (3) interpretation of sources; and (4) the compilation of sources deemed valid and credible into a written work or historiography.

The historical sources used in this research are categorized into two types: primary and secondary sources. Written primary sources consist of digitized newspaper archives and newspaper archives in clippings. Secondary sources are obtained through a literature review of books by relevant scholars and experts as well as articles in online journals. These sources serve to complement the primary sources in order to gain a deeper understanding of the issues being studied. In addition, this study also uses oral sources in the form of interviews with Baron fishermen and farmers in Kemadang Village.

Increase in Population Income

One of the coastal areas that has seen significant maritime development is Baron Beach, located in Gunungkidul Regency. Based on fish production data, it is evident that there was a positive growth rate from 2011 to 2015, reaching 104.91%. However, there was a drastic decline in 2013 due to a fish scarcity season, high waves, and bad weather. In 2014, production rose again due to clear weather and relatively calm sea waves. Nevertheless, in July 2014, another fish scarcity season occurred, halting fishing activities for an entire month. This period of fish scarcity occurs annually, generally from July to August. It is influenced by various natural factors, such as the eastern wind season and fish spawning periods. Detailed fish production data from 2011 to 2015, as presented in Table 1, show the fluctuations in catch yields.

Table 1. Fish Production at Baron Beach from 2011–2015

No	Month	Production (Kg)				
		2011	2012	2013	2014	2015
1	January	1.459	3.452,9	2.879,5	305,2	4.201,7
2	February	2.437,85	6.046,35	1.296,45	6.425,75	7.510,5
3	March	2.866,1	2.679,9	4.174,45	14.446,5	3.346,3
4	April	2.673,1	1.362,55	5.807,7	3.373,05	11.465,55
5	May	341,3	2.545,8	1.191,15	349,65	4.261,3
6	June	590,1	3.503,2	853,55	8.049	4.247
7	July	2.332,1	2.251,5	2.403,15	0	7.098
8	August	4.043	853	3.859	2.121,1	5.561
9	September	1.887,2	12.791,05	5.976,85	7.075,4	10.357
10	October	34.369,3	27.436,25	8.640,7	28.591,7	42.751,7
11	November	17.205,4	11.642,6	6.908,45	84.878,05	64.909,1
12	December	15.168,4	7.151,15	5.675,6	49.587,6	9.228,3
Total		85.372,85	81.716,25	49.666,55	205.203	174.937,45
Development (%)						104.91%

Source: Fish Production Data at Baron TPI for the Years 2011-2015

Abundant fish production has a direct impact on increased income, the more catches there are, the greater the earnings obtained. Fishermen in Baron can earn income two to three times a week, and the average annual income of fisherfolk farmers is quite substantial. Nevertheless, there are significant differences in income among the fishermen. Fisherfolk farmers who own boats have higher incomes and a more prosperous life compared to laborer fishermen and shore fishermen. Fisherfolk farmers (owners) possess capital in the form of money and boats, labor (workers), and enjoy high social status within the community. On the other hand, laborer fishermen have lower incomes because they rely solely on the work provided by boat owners. The working relationship between the boat owner and crew is employer-laborer in nature, using a wage or profit-sharing system. Meanwhile, the income of shore fishermen is lower than that of laborer fishermen since they only fish in the peripheral areas (Leslie 2011, 98).

Based on asset ownership, fishermen at Baron Beach are divided into three categories: highly advanced fishermen, advanced fishermen, and less advanced fishermen. Highly advanced fishermen are those who own two boats; advanced fishermen are those who own only one boat; and less advanced fishermen are those who do not own a boat or

work as laborer fishermen (Setiowati 2006, 66). To provide a concrete example of this classification, one of the highly advanced fishermen in the Baron Beach area is Suyit (71 years old), who owns two boats and has a crew of four people. One of the advanced fishermen in the Baron Beach area is Sumardi (43 years old), who owns one boat and two crew members. Meanwhile, one of the less advanced fishermen or laborer fishermen in the Baron Beach area is Wardi (63 years old), who only works as a crew member and also has a side job as an agricultural laborer. The average monthly income of Baron fishermen based on the above categories can be seen in table 2 below.

Table 2. Average Monthly Income of Baron Fishermen Based on the Categories of Highly Advanced Fishermen, Advanced Fishermen, and Less Advanced Fishermen in 2012

No	Month	Year 2012		
		Highly Advanced Fishermen (Usaha Jaya)	Advanced Fishermen (Mardi GR)	Less Advanced Fishermen (ABK)
1	January	1.951.500	1.554.750	975.750
2	February	1.894.250	3.175.250	947.125
3	March	619.000	1.245.750	309.500
4	April	796.750	571.250	398.375
5	May	106.750	623.500	53.375
6	June	966.000	960.500	483.000
7	July	0	229.500	0
8	August	0	285.000	0
9	September	2.150.000	873.000	1.075.000
10	October	4.376.000	3.598.250	2.188.000
11	November	11.331.750	3.998.000	5.665.875
12	December	17.979.000	9.861.000	8.989.500
Total Revenue		42.171.000	26.975.750	21.085.500

Source: Primary Data Analysis of Daily Income per Vessel at Baron Fish Auction Place

Based on the data in Table 2, it can be seen that there has been an increase in income among Baron fishermen in the categories of highly advanced fishermen, advanced fishermen, and less advanced fishermen. The Baron fishermen apply a profit-sharing system between the boat owner and the crew, with 50% allocated to the owner and 50% to the crew members, which is then divided equally according to the number of crew members. For example, if a single trip yields Rp630,000, that amount is split in two, with Rp315,000 going to the crew. If there are two crew members, each will receive an income of Rp157,500 (Interview with Suyit, 2021). This profit-sharing system ensures a fair distribution of income between the boat owner and the crew, while also serving as an effort to maintain harmonious relations between them, which is crucial for the sustainability of the fishing business in Baron.

Improvement of Population Welfare

The shift in livelihood from dry land farmers to fishermen has improved the welfare of the community in the Baron Beach area. This positive change can be seen through better social and economic conditions. This is evident from the increase in property ownership, higher

education levels, and improved housing. These three changes indicate greater stability and welfare among fishermen as a result of the transition from the agrarian sector to the maritime sector. This increase in welfare is not only felt by the fishermen themselves, but also brings positive impacts to the community in Kemadang Village.

In the past, the majority of Baron fishermen owned very limited household furnishings, often with only a radio as their sole electronic device. The income of fishermen in Baron plays a role in boosting the community's economic activity. The higher the fishermen's income, whether from fishing or side businesses, the greater the impact on the community's economic growth. This is reflected in the increased fulfillment of daily needs, higher savings, increased business capital owned by fishermen, as well as greater asset ownership (Nurbaya 2019, 29-30). An example of a Baron fisherman who has experienced an increase in property ownership is Suyit (71 years old), who now owns two boats, a spacious permanent house, a motorcycle, various electronic goods (such as a TV, refrigerator, and washing machine), a seafood restaurant, a field, as well as various fishing tools (innovative fish bait). In addition to Suyit, Sumardi (43 years old) has also experienced an increase in property ownership. He owns one boat, a permanent house, a motorcycle, a car, various electronic goods, a field, various fishing tools, and a bonsai plant business.

Increased income affects the ownership of assets, including the growth of business capital. For example, business capital for capture fisheries activities is supported by adequate fishing gear technology and operational costs. Business capital can be divided into two types: external capital and internal capital. External business capital is obtained through grants in the form of fishing equipment from the Fisheries and Marine Affairs Agency (DKP) of Gunungkidul Regency. These fishing tools include nets, fishing lines, and other equipment. The purpose of the fishing gear assistance provided by the government at the national level is to promote an increase in capture production and fishermen's income, which in turn becomes an indicator of the welfare of coastal fishermen (Rangkuty 2018, 62). The grant of fishing equipment is properly managed by the Baron fishermen's group so that its members can use it. This fishing equipment grant is regularly received by Baron fishermen every three years (Interview with Suyit, 2021).

In addition, there is also internal business capital that comes from profit-sharing funds. Each time profits are distributed from fishing activities, fishermen are required to pay 4% of their catch to the fishermen's group. Other internal capital comes from loan service fees. Each member who receives assistance is required to contribute 10% of their earnings from each fishing trip, provided that the fisherman earns more than Rp500,000. The funds collected from profit-sharing and loan service fees are then managed by the fishermen's group for the common good. These funds are used for various fishermen's needs, particularly operational expenses. This system not only reflects efforts to achieve financial independence but also strengthens social ties among members.

Ownership of other assets comes in the form of savings used for children's educational needs when continuing to a higher level of education. These savings may take the form of money, gold, or land. For example, a fisherman-farmer may purchase one hectare of land for agriculture and hire laborers to work that land. If someone borrows money from the landowner and is unable to repay it, the borrower is then required to provide their labor by working in the fields (Interview with Suyit, 2021). In addition, there are fishermen who use their money as business capital in order to gain greater profits. For instance, Sumardi has a side business cultivating and selling bonsai plants to generate profit and increase his income, in addition to working as a fisherman.

In the socioeconomic life of fishermen, there is a tendency for wives to play a role as economic supporters of the household and contributors to the family's livelihood. According to Susoliwati (2006, 63), there are three main motivations driving fishermen's wives to

participate in economic activities: the need to fulfill household economic demands, the desire to utilize their skills, and a sense of responsibility towards the family (Saraswati 2014). A similar pattern is found among fishermen's wives at Baron Beach. Seeing the business opportunity, the wives of fishermen open seafood food stalls, such as Suyit's wife, who offers a variety of seafood menu items, as Baron Beach is the main tourist destination in Gunungkidul Regency. Domestic tourists visiting to enjoy the beach atmosphere and coastal culinary specialties are the primary target consumers for these businesses.

In addition, progress has also been seen in the field of education. According to statistical data from Gunungkidul Regency in 1982, the average education level of residents in Kemadang Village was relatively low. The formal education of farmers and fishermen in Kemadang Village was generally limited to elementary school graduation, and only a few continued to junior high school. The limited number of schools also resulted in many students dropping out. The low level of education was caused by the weak economic capacity of the coastal community. As the economy improved due to shifts in the community's livelihoods, this then had an impact on the education level of the fishermen's children. For example, a fisherman named Wardi (63 years old) was able to send his child to a nursing academy in Yogyakarta (Interview with Wardi, 2021). The cost of education for a nursing major is certainly not small, but he was able to fund his child's schooling up to graduation. He works as a labor fisherman, farm laborer, and tree cutter. This proves that changes in livelihood can have a positive impact on the education level of Kemadang Village residents, who previously experienced many dropouts due to lack of funds.

Based on the monograph of Kemadang Village in 2000, the average education level of Kemadang Village residents was as follows: 3,225 people graduated from elementary school, 1,131 from junior high school, 230 from senior high school, 479 did not finish school, and only 22 continued to university. Meanwhile, in 2014 there was an increase in the education level of Kemadang Village residents: 2,332 had graduated from elementary school, 1,399 from junior high school, 559 from senior high school, and 87 continued to university. This improvement shows there has been progress in access to and awareness of the importance of education in Kemadang Village. The improvement in educational attainment among Kemadang Village residents can be seen in the following table 3.

Table 3. Population by Education Level in Kemadang Village in 2000 and 2014

No	Education Level of Kemadang Village Residents in 2000	Number (people)	Educational Level of Kemadang Village Residents in 2014	Number (people)
1	Not yet in school	1.062	Not yet in school	1.016
2	Did not finish school	479	Did not finish school	628
3	Graduated from elementary school	3.225	Graduated from elementary school	2.332
4	Graduated from junior high school	1.131	Graduated from junior high school	1.399
5	Graduated from high school	230	Graduated from high school	559
6	University	22	University	87
Total		6.149	Total	6.021

Source: Monograph Data of Kemadang Village 2000 and 2014

The improvement in the welfare of fishermen in Baron Beach, Kemadang Village, can also be seen from the increasingly decent living conditions. In 1987, fishermen's housing in Kemadang Village was still limited, with simple houses made of woven bamboo (*gedhek*) walls, thatched roofs, and dirt or tiled floors. By 2000, along with the increase in fishermen's incomes in Baron, improvements to residents' homes began to take place. Houses that originally had wooden (board) or bamboo (*gedhek*) walls were replaced with brick walls, thatched roofs were replaced with roof tiles, and dirt floors were changed to tiles or even ceramic. The size of the houses owned by Baron's fishermen also varies. Hamlets that have experienced improvements in housing to become densely populated areas include Rejosari, Sumuran, and Watubelah. For example, Suyit (71 years old), a fisherman from Baron who lives in Sumuran hamlet, owns a house with a building area of 70 m², renovated with brick walls, tiled roof, and ceramic floors. The building consists of 4 bedrooms, 1 bathroom, a kitchen, a living room, and a family room. In addition, Sumardi (43 years old) owns a house with a building area of 40 m² with brick walls accented with natural stone, a tiled roof, ceramic floors, a minimalist interior design, and a car garage.

Advancements in Baron Beach Facilities and Infrastructure

The shift in livelihoods among the residents of Kemadang Village from cultivating dry land to becoming fishermen has influenced the facilities and infrastructure at Baron Beach. The activities of fishermen and tourism at Baron Beach are intertwined and coexist. Therefore, to support both activities, the Gunungkidul Regional Government has undertaken efforts to improve the facilities and infrastructure. The purpose of enhancing these facilities and infrastructure is to make it easier for fishermen to catch and market fish, as well as to support tourism activities at Baron Beach. Infrastructure improvements at Baron Beach include the construction of a lighthouse on the hill to the east of the beach. Initially, the lighthouse was a signal tower structure consisting of poles, resembling TV or cellular signal towers. In 2014, the Directorate of Sea Navigation of the Directorate General of Sea Transportation, Ministry of Transportation, built a 40-meter tall lighthouse (Edo 2017). This lighthouse serves as a marker for fishermen's boats sailing at sea. In emergency situations for fishermen, the lighthouse can be used as a signal indicating that Baron Beach can serve as a harbor for boats to dock (Interview with Suwarji, 2021). In addition, the lighthouse has become a tourist spot for visitors to Baron Beach. Tourists who climb the lighthouse are charged a retribution fee of Rp5,000 per person.

Other infrastructure developments include improvements to the fish processing building and the relocation of traders by the Marine and Fisheries Office of Gunungkidul Regency. The renovations carried out in 2015 added several rooms: a room for the fish processing and marketing group (Poklahsar) Mina Boga (fish traders group), Mina Makmur (fish traders), and Mina Samudra (fishermen group) (Interview with Suwarji, 2021). The relocation of traders was accomplished by moving them to the former Fish Auction Place (TPI) building. This was done to ensure that the TPI location is closer to the beach, unobstructed by the traders' associations. The best position for the TPI is close to the shore to make it easier for fishermen to bring in their catch after going out to sea (Natalia 2016). In addition, Baron TPI can also be used for educational tourism, offering visitors an opportunity to learn about the fish trade process, from the time the fish are caught by the fishermen to the fish auction activities.

The development of facilities at Baron Beach includes the addition of boats. The number of outboard motorboats in 2016 was 51 units, which increased to 55 units in 2017. The "jukung" boats, which are usually used for fishing, have been repurposed as tourist boats. This has provided fishermen with an opportunity to take on additional work when they are not fishing, namely as operators of tourist boats. At least 10 boats operate daily to

serve visitors interested in maritime tourism, even if only along the shoreline. Visitors pay only Rp5,000 per person for a 5-minute boat ride. Each boat can accommodate 8–10 people. These tourist boats do not operate every day, but only during the off-season when fish are scarce. When the fishing season arrives, the boats return to their original function as fishing boats. Thus, the tourist boat business serves as a supplementary job besides the fishermen's primary occupation.

Regarding the profit from this side business, in 2014, the gross income from the tourist boat business was Rp800,000, which, after deducting the cost of 5 liters of fuel at Rp35,000, left Rp765,000. This remaining amount was then divided among the people operating the boat; for example, if there were 10 people, Rp765,000 would be divided by 10, so each would receive Rp76,500 (Waluyo 2014). Nevertheless, though the income from this side business appears promising, earnings from the tourist boats are not consistent. The amount depends heavily on the number of visitors to Baron Beach, which is typically crowded on weekends by people from out of town looking to enjoy themselves at the beach. In 2019, the ticket price for a tourist boat ride increased to Rp10,000 per person. On weekends, the gross income earned by each group of tourist boat operators could reach around Rp8,000,000. After deducting Rp47,500 for 5 liters of fuel, the remaining Rp7,952,500 would be divided equally among 20 people, with each earning around Rp398,000 (Interview with Deky, 2023).

Conclusion

The shift in livelihood among the residents of Kemadang Village from tenant farmers to fishermen has brought about a significant increase in their income and well-being. Driven by the abundant fish production at Baron Beach, fishermen are able to earn income two to three times a week, which is a stark contrast to their previous farming days, when they only earned twice a year. The income earned by farmer-fishermen who own boats is higher compared to laborer fishermen. This is because boat-owning farmer-fishermen have both capital and labor (workers), while laborer fishermen rely solely on jobs provided by the boat owners. This rise in income has had a direct impact on improving their standard of living, as seen by the increased ownership of assets such as motor vehicles, electronic goods, and land. In addition, improved access to education now enables fishermen's children to continue on to higher education, along with improvements to housing from semi-permanent to permanent structures. The activities of the Baron fishermen have also encouraged improvements in facilities and infrastructure, including the construction of a lighthouse, the renovation of the fish auction building, the relocation of traders, and an increase in the number of boats from 51 units to 55 units.

References

- Azahra, Jihan Nasywa., Khoiri, Tegar Waraprada., Puspita, Mei Candra Ayu., and Ribawati, Eko. 2024. "Revolusi Hijau Masa Orde Baru." *Sindoro: Cendikia Pendidikan* 5 (3): 1-10. <https://doi.org/10.9644/sindoro.v4i5.3317>
- Department of Marine Affairs and Fisheries. 2018. *Daftar Rumah Tangga Perikanan Tangkap Laut di Desa Perikanan Tahun 2017*. Gunungkidul. Department of Marine Affairs and Fisheries of Gunungkidul Regency.
- Department of Marine Affairs and Fisheries. 2016. *Pemilihan Desa Sampel Penangkapan Ikan di Laut*. Gunungkidul. Department of Marine Affairs and Fisheries of Gunungkidul Regency.

- Gunungkidul Regency Central Statistics Agency. 2001. *Monografi Desa Kemadang Tahun 2000*. Gunungkidul. Gunungkidul Regency Central Statistics Agency.
- Gunungkidul Regency Central Statistics Agency. 2015. *Monografi Desa Kemadang Tahun 2014*. Gunungkidul. Gunungkidul Regency Central Statistics Agency.
- Gultom, Ferdi., and Harianto, Sugeng. 2021. "Revolusi Hijau Merubah Sosial-Ekonomi Masyarakat Petani." *Temali: Jurnal Pembangunan Sosial* 4 (2): 145-154. <https://dx.doi.org/10.15575/jt.v4i2.12579>
- Interview with Wardi, aged 63, Juni 27, 2021.
- Interview with Sumardi, aged 43, Juni 27, 2021.
- Interview with Suwarji, aged 45, Juni 28, 2021.
- Interview with Deky, aged 26, Juni 24, 2023.
- Interview with Suyit, aged 73, Juni 24, 2023.
- KH, Kandar. "Menikmati Panorama Pantai dari Menara Suar Pantai Baron." *Seputargk.id*, January 31, 2017. <https://seputargk.id/menikmati-panorama-pantai-dari-menara-suar-pantai-baron/>
- Leslie, Liana Fatma., and Suhatmini Hardyastuti. 2011. "Analisis Ekonomi Rumah Tangga Petani Nelayan dalam Mendukung Strategi Penghidupan Berkelanjutan Kawasan Pantai Baron Kabupaten Gunungkidul." *Agro-Ekonomi* 18 (1): 91-104. <https://doi.org/10.22146/agroekonomi.16702>.
- Natalia, Mediani Dyah. "Penataan Gunungkidul: Relokasi Pedagang Pantai Baron Menuai Protes". *Solopos*, February 7, 2016.
- Nurbaya. 2019. "Pengaruh Pendapatan Nelayan Terhadap Peningkatan Ekonomi di Desa Wewangriu Kecamatan Malili Kabupaten Luwu Timur Sulawesi Selatan." Undergraduate Thesis, Universitas Muhammadiyah Makassar. <https://digilibadmin.unismuh.ac.id/upload/6363-Full Text.pdf>
- Rangkuty, Dewi Mahrani. 2018. "Analisis Penilaian Penerapan Bantuan Alat Tangkap pada Hasil Tangkap Nelayan Pesisir Desa Pahlawan Kecamatan Tanjung Tiram Kabupaten Batu Bara." *Ekonomikawan: Jurnal Ilmu Ekonom dan Studi Pembangunan* 18 (1): 59-68. <http://dx.doi.org/10.30596/ekonomikawan.v18i1.2153>
- Salsabila, Viona., Aini, Mabdiyah Qurroti., Mariatul, Nanda., Gata, Kinara., Dedayev, Tadev., and Budiyanto, Eko. 2024. "Analisis Potensi Sumber Daya Wilayah Pantai Baron sebagai Destinasi Wisata Pantai Selatan." *Jurnal Pangea: Wahana Informasi Pengembangan Profesi dan Ilmu Geografi* 6 (2): 10-19. <https://doi.org/10.33387/pangea.v6i2>
- Saraswati, Putu Anisa. 2017. "Peranan Istri Nelayan dalam Menunjang Kehidupan Keluarga (Studi pada Istri Nelayan di Daerah Pesisir Pantai, Desa Pemaron, Kecamatan Buleleng, Kabupaten Buleleng Dilihat dari Perspektif Sosial Ekonomi dan Budaya)." *Jurnal Pendidikan Kewarganegaraan Undiksha* 5 (1). <https://doi.org/10.23887/jpku.v5i1.22039>
- Simbolon, Domu. *Bioteknologi dan Dinamika Daerah Penangkapan Ikan*. Departemen Pemanfaatan Sumberdaya Perikanan Fakultas Perikanan dan Ilmu Kelautan Institut Pertanian Bogor, 2011.
- Waluyo, Agus. "Perahu Nelayan Alih Fungsi Jadi Perahu Wisata." *Kedaulatan Rakyat*, June 30, 2014.