

## ANALYSIS OF MARINE ECOTOURISM DEVELOPMENT IN MANGROVE FORESTS TO IMPROVE THE WELFARE OF THE LUBUK KERTANG VILLAGE COMMUNITY LANGKAT REGENCY

Wahyu Zuliah Sasmita<sup>1</sup>, Rusiadi<sup>2</sup>, Annisa Ilmi Faried<sup>3</sup>

<sup>1,2,3</sup>Universitas Pembangunan Panca Budi, Indonesia, [wahyu.sasmita@gmail.com](mailto:wahyu.sasmita@gmail.com)

\*Corresponding author: [wahyu.sasmita@gmail.com](mailto:wahyu.sasmita@gmail.com)

**Abstract:** *The long distance traveled and the lack of infrastructure such as roads and public transportation have reduced the interest of tourists to visit the Mangrove Forest Marine Tourism object. The lack of resting places for tourists such as cottages and lodging places also triggers the lack of interest of tourists to visit. Conversely, if the availability of infrastructure such as good roads and easy to pass, signposts, and the availability of comfortable and quiet resting places can be the main attraction for tourists who want to visit these attractions. This study aims to determine whether the value of natural beauty, educational value, facilities and infrastructure, tourists, promotions, fees, handicrafts, and income are relevant to improving the welfare of the community in Lubuk Kertang Village, Langkat Regency and to determine the role of the government in developing ecotourism attractiveness in improve the welfare of the community in Lubuk Kertang Village, Langkat Regency. What is examined is whether the value of natural beauty, educational value, facilities and infrastructure, tourists, promotions, fees, handicrafts, and income are relevant to improving the welfare of the community in Lubuk Kertang Village, Langkat Regency and what is the role of the government in developing ecotourism attractiveness in improving people's welfare. in Lubuk Kertang Village, Langkat Regency. With a sample of 207 respondents, which were collected by distributing questionnaires and processing data using Confirmatory factor analysis (CFA) and Multiple Linear Regression. Based on the results of the Confirmatory Factor Analysis (CFA) test in the KMO and Bartlett's test table, it shows that promotion, tourists, educational values and income significantly affect the welfare of the people in Lubuk Kertang Village, while the value of natural beauty, infrastructure, user fees and handicrafts has a negative effect. or not significant to the welfare of the community in Lubuk Kertang Village. And the results of multiple linear regression testing show the partial hypothesis test results that the value of natural beauty, retribution, tourists and income is significant for the welfare of the people in Lubuk Kertang Village.*

**Keywords:** *Promotion, Tourists, Educational, Income and Development, Ecotourism*

---

### INTRODUCTION

One form of tourism product derived from the concept of sustainable tourism development is through the concept of ecotourism development. Ecotourism offers an integrated tourism value that balances the enjoyment of natural beauty with efforts to preserve it. Ecotourism can play an active role in providing solutions and addressing problems that may arise in the development of tourism areas.

One type of nature- and environment-based ecotourism that is popular among both local and international tourists, and often becomes a national issue, is mangrove ecotourism. This is because mangroves are unique ecosystems with beauty and high biodiversity (Khoiri, 2014). Some forms of coastal tourism in mangrove forests include the

construction of walkways such as bridges among the mangrove plants, which attract visitors. Structures such as traditional pavilions (joglo) can also be built among the trees, along with recreational activities like fishing and boating around the mangrove forest. According to the Regulation of the Minister of Tourism and Creative Economy/Head of the Tourism and Creative Economy Agency Number 9 of 2021 concerning guidelines for sustainable tourism destinations, ecotourism is defined as responsible nature tourism activities that consider elements of education, understanding, and support for natural resource conservation efforts, as well as the improvement of local community income. Types of ecotourism include marine ecotourism, mountain ecotourism, forest ecotourism, and karst ecotourism. Each type is further categorized by location, one of which is coastal tourism namely, mangrove forest ecotourism.

In addition to being a recreational site, the development of mangrove ecotourism is also intended to serve as a means of education and scientific knowledge, while fostering a sense of love and care for nature. Mangrove ecotourism is an environmentally conscious tourist attraction that emphasizes the natural beauty of mangrove forests and the fauna living around them, without damaging the ecosystem in order to make it more attractive to tourists. This is because mangrove forests have unique characteristics and host a wide variety of flora and fauna (Rachmawati, 2016).

Long travel distances and a lack of infrastructure such as roads and public transportation reduce tourist interest in visiting the Mangrove Marine Tourism site. The lack of resting places for tourists, such as huts and accommodations, also contributes to the low interest in visiting. Proper management of the Mangrove Marine Ecotourism site is necessary and should be prioritized, especially regarding infrastructure leading to the site such as repairing damaged roads to increase tourist interest in visiting the mangrove tourism site. In addition, the construction of huts and lodgings for tourists to rest is also essential to boost tourism appeal, which in turn can increase local income and improve the welfare of surrounding communities.

It should be noted that good road access alone is not sufficient without the availability of transportation facilities. For individual tourists, public transportation is crucial because they often plan their trips independently without the help of travel agents, making them heavily reliant on public services and facilities. The availability of infrastructure such as good and accessible roads, clear road signs, and comfortable resting places can be a special attraction for tourists who wish to visit the site.

## **LITERATURE REVIEW**

### **1. Community Welfare**

Welfare is often broadly defined as prosperity, happiness, and the quality of human life at both the individual level and within family and community groups. Welfare is a system of social, material, and spiritual life and livelihood that is enveloped in a sense of safety, morality, and inner peace, allowing every citizen to make the best efforts to fulfill their physical, spiritual, and social needs for themselves, their households, and society. (Iwan Nugroho, 2014). Nurkse's theory in 1953 states that low societal welfare is partly caused by high poverty levels. Based on Nurkse's theory, low welfare levels are caused by market imperfections, lack of capital, and underdeveloped human resources, leading to low productivity.

According to Law No. 11 of 2009 on Social Welfare, social welfare is a condition in which the material, spiritual, and social needs of citizens are fulfilled so they can live decently and develop themselves, thereby being able to perform their social functions. Welfare is the level of satisfaction a person obtains from consuming the income they receive. However, the degree of welfare itself is relative, as it depends on the extent of satisfaction derived from the consumption of that income.

The relationship between the concept of welfare and the concept of needs lies in the idea that once these needs are fulfilled, a person is considered to be in a state of welfare, because the level of need fulfillment indirectly aligns with the indicators of welfare.

In general, social welfare is often defined as a state of well-being — a condition in which all forms of life necessities are fulfilled, especially basic needs such as food, clothing, housing, education, and healthcare. Welfare can also be defined as the primary arena or domain in which social work is carried out. As an analogy, health is the field where doctors play their role, and education is the area where teachers perform their

professional duties. Interpreting social welfare as an arena positions it as a means or vehicle to achieve development goals. (Rahmawati, 2017).

## **2. Ecotourism**

Ecotourism is more popular and widely used compared to the proper translation of the term ecotourism, which is ekoturisme. The correct translation of ecotourism is ecological tourism. The Nature Mitra Indonesia Foundation (2015) translated ecotourism as ekoturisme. In this writing, the term ecotourism is used, which is widely employed by forestry experts. This is exemplified in one of the seminars at the Reunion of the Faculty of Forestry, Gadjah Mada University (Fandeli, 2018). Then Nasikun (2019) used the term ecotourism to describe a new form of tourism that emerged in the 1980s. The understanding of ecotourism has evolved over time. However, in essence, the definition of ecotourism is a form of tourism that is responsible for the preservation of natural areas, provides economic benefits, and maintains the cultural integrity of local communities. Based on this understanding, ecotourism essentially represents a form of conservation movement carried out by the world's population. This eco-traveler is essentially a conservationist.

Ecotourism is a form of tourism managed with a conservation-based approach. While ecotourism involves the management of nature and community culture that ensures sustainability and well-being, conservation refers to efforts to maintain the sustainable use of natural resources for both present and future generations. This aligns with the definition provided by the International Union for Conservation of Nature and Natural Resources (1980), which states that conservation is a human effort to utilize the biosphere in a way that provides maximum and sustainable benefits for both current and future generations.

Meanwhile, destinations favored by ecotourists are natural areas. Conservation areas that serve as tourist attractions can include National Parks, Grand Forest Parks (Taman Hutan Raya), Nature Reserves, Wildlife Reserves, Recreational Parks, and Game Reserves. However, other forest areas such as protected forests and production forests can also be used for ecotourism development if they contain natural attractions.

Natural areas of ecosystems such as rivers, lakes, swamps, peatlands, and areas at river sources or estuaries can also be utilized for ecotourism. The approach that must be implemented is to ensure that these areas remain preserved as natural environments.

## **3. Natural Beauty Value**

Beauty comes from the word "indah," which means good, pleasant, beautiful, lovely, charming, and so on. Objects that possess beauty include all works of art (although not all works of art are beautiful), natural scenery (beaches, mountains, lakes, flowers on mountain slopes), humans (faces, eyes, lips, noses, hair, feet, bodies), houses (yards, household furniture, etc.), sounds, colors, and so on. Beauty is identical to truth. There are also those who argue that beauty is a collection of harmonious relationships within an object and between that object and the observer.

Hege and Bernard Bosanquet (1988), in the theory adopted by Plato, state that the beauty that creates aesthetic value is a quality inherent in the beautiful object in question. The aesthetic value is created by the fulfillment of certain principles regarding the form of an object, such as a work of art created by an artist.

The beauty of nature is said to be the astonishing harmony of natural laws revealed to those who have the ability to perceive it. In general, humans have a sense of beauty, and when they see something beautiful, they will be captivated. Beauty as a certain object that shows beauty has a different understanding and value concept compared to abstract qualities, where the object in question is something that generally represents beauty and can be easily accepted and understood by society (Hertati, 2017).

## **4. Education Value**

Rodger (1998), Educational tourism is a program where participants of tourism activities travel to a specific location in a group with the main goal of gaining direct learning experiences related to the visited location. Etymologically, education comes from the Latin word "educare," which means "to bring out," "to lead," and "to bring forth." Education is a learning process carried out both formally and informally to achieve a better learning process, aimed at educating, providing knowledge, and developing one's potential (Khoiri, 2014).

Based on the concept of education, educational tourism is an idea that applies non-formal education to knowledge for tourists when visiting a tourist attraction. The implementation of the educational tourism concept is a multidimensional and multidisciplinary concept, thus requiring thorough preparation and strict supervision of its implementation to align with the intended goals.

### **5. Facilities and Infrastructure**

The Routledge Dictionary of Economics (1995), infrastructure is a primary service of a country that supports economic activities and community activities so that they can continue, namely by providing transportation and other supporting facilities. Tourism Facilities are all the amenities in tourist destinations that are necessary to serve the needs of tourists in enjoying their travel experiences, which consist of companies that provide services to tourists, both directly and indirectly, and whose livelihoods largely depend on the arrival of tourists. Infrastructure is all the facilities that enable the economic process to run smoothly, making it easier for tourists to meet their needs (Pauziah, 2017). Tourism facilities are the amenities and companies that provide services to tourists, both directly and indirectly. The progress of tourism facilities depends on the number of tourist visits; therefore, the existence of tourism facilities is very important and essential to provide quality services to tourists (Umasugi, 2017).

Tourism infrastructure is all the facilities that support tourism facilities to thrive or develop and provide services to tourists to meet diverse needs. According to (Kuncoro, 2015), tourism infrastructure is the main or basic facilities that enable tourism facilities to thrive and develop in order to provide services to tourists (Wulandari, 2016).

### **6. Tourist**

A tourist is a person, or refers to behavior related to someone, who makes a visit away from their place of residence for approximately one night, in order to gain a pleasant experience through interaction with the uniqueness of the place they visit (Herman, 2017).

According to A.J. Norwal (1999), a tourist is someone who enters another country for any purpose other than seeking employment or permanent residence and who spends money in the destination country, with the money spent not originating from that country.

In Indonesia, the term "tourist" is defined according to Presidential Instruction No. 9 of 1969 as any person who travels away from their place of residence to visit another place or region with the intention of enjoying a travel experience.

From these definitions, it can be concluded that a tourist is someone who undertakes a journey lasting more than 24 hours, done only temporarily, and not for the purpose of earning income in the country being visited (Eviana, 2016).

### **7. Promotion**

Promotion is defined as an activity carried out to convey a specific message about a product whether a good or service, a brand, a company, and so on to consumers in order to assist marketing efforts and increase sales.

Julian Cummins (1991) defines promotion as a series of techniques used to achieve sales or marketing targets in a cost-effective manner, by adding value to a product or service, whether for intermediaries or end users. It is usually not limited to a specific time period. Promotion is an action aimed at increasing sales, as well as a strategy to persuade prospects to make a purchase (Erbabley, 2019).

From these three definitions, it can be concluded that promotional activities not only function as a means of communication between a company and consumers, but also as a tool to influence purchasing behavior based on the desires and needs of the consumer. These goals can be achieved through the use of promotional tools.

### **8. Retribution**

Donaldson and Davis (1991), who describe a situation where management is not motivated by individual goals but rather directed towards their main outcome objectives for the benefit of the organization. The theory assumes that there is a strong relationship between satisfaction and organizational success. The success of the organization reflects the maximization of the utility of the principals and management group. The maximization of the group's utility will ultimately maximize the interests of the individuals within that organizational group.

Retribution is a fee that must be paid by users of the facility to the owner or manager

as a condition for using the facility. People pay retribution primarily to use public facilities provided by the central or local government. For example, in the United States, fees must be paid by tourists who enter or ascend to the top of the Statue of Liberty, visit national parks, or use certain services at the Library of Congress. Unlike taxes, retribution can provide direct compensation (Rachmawati, 2016).

### 9. Crafts

Craft is defined as work done by hand that requires special skills, resulting in something beautiful. The beauty and charm are a reflection of fairness, sincerity, simplicity, and friendliness (Hayati, 2019). In A Theory of Craft, Howard Risatti (2013), describes craft as a unique blend of functions with expressions of deeper human values that transcend culture, time, and space. Craft must articulate its own role in contemporary society. Crafts are also referred to as works of art whose creation process involves the skillful hands of humans. Usually, the result of a craft can produce a beautiful decoration, an object with a high level of artistic touch, and ready-to-use items.

### 10. Income

Income is the money received by individuals, companies, and other organizations in the form of wages, salaries, rent, interest, commissions, fees, and profits. Income or wages also mean the money paid by someone who provides work to employees for their services according to an agreement. The level of income is the acquisition of goods, money received, or generated by that society. The income level of the community in a certain area is one of the indicators to assess the economic condition of that particular community (Sulastri, 2018).

According to the pioneers of classical economics, Adam Smith and David Ricardo, income is classified into three main social classes: workers, capitalists, and landlords. These three determine the three factors of production, namely labor, capital, and land. According to Georgi Mankiw (1998), he refers to societal income as personal income, which is the income received by households and non-corporate business economies. Per capita income is the average income of a country's population over a specific period, usually one year. Per capita income can also be defined as the total value of goods and services available to each resident of a country over a specific period. Per capita income is obtained from the national income in a given year divided by the population of the country in that year.

## RESEARCH METHOD

This research approach is Mixed Method, which combines quantitative and qualitative research aimed at understanding the degree of relationship and patterns/forms of influence between two or more variables. Through this research, a theory will be developed that serves to explain, predict, and control a phenomenon (Rusiadi, 2015). This research is an analysis of the development of marine ecotourism in mangrove forests to improve the welfare of the community in Lubuk Kertang Village, Langkat Regency, North Sumatra Province, considering that the tourism facilities are still inadequate.

## RESULTS AND DISCUSSION

### RESULTS

**Table 1. KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.482
Bartlett's Test of Sphericity	Approx. Chi-Square	73.187
	Df	36
	Sig.	.000





well-being of the community.

However, this is not the case with the research conducted by (Hayula, 2016) where the results of the study showed that the factor of aesthetic value was not significant to the well-being of the community. This is due to the fact that visitors to a tourist destination do not only enjoy the natural beauty but also the attractions available at the location. Furthermore, the results of this study are also inconsistent with previous research conducted by (Agus, 2017) where the results of the study indicated that aesthetic value was not significant to the well-being of the community.

Based on the results of the Confirmatory Factor Analysis (CFA) management on the rotation output (Rotated Component Matrix), it shows that the largest component 2 is retribution at 0.792, which is worthy of influencing community welfare. Therefore, it can be concluded that retribution significantly affects community welfare. Based on the results of the Confirmatory Factor Analysis (CFA) management on the rotated output (Rotated Component Matrix), it shows that the largest component 3 is tourists at 0.647, which is deemed capable of influencing community welfare. Therefore, it can be concluded that tourists have a significant impact on community welfare. Based on the results of the Confirmatory Factor Analysis (CFA) management on the rotation output (Rotated Component Matrix), the largest component 4 is income at 0.793, which is significant in influencing community welfare. So it can be concluded that income has a significant impact on the welfare of the community.

Based on the results of the Confirmatory Factor Analysis (CFA) management on the rotation output (Rotated Component Matrix), it shows that the educational value factor is not suitable to influence community welfare. Therefore, it can be concluded that the educational value is not significant to community welfare. Based on the results of the Confirmatory Factor Analysis (CFA) management on the rotation output (Rotated Component Matrix), it shows that the infrastructure factor is not suitable to influence community welfare. Therefore, it can be concluded that infrastructure is not significant to community welfare. Based on the results of the Confirmatory Factor Analysis (CFA) management on the rotation output (Rotated Component Matrix), it shows that the promotion factor is not suitable to influence community welfare. Therefore, it can be concluded that promotion is not significant to community welfare. Based on the results of the Confirmatory Factor Analysis (CFA) management on the rotation output (Rotated Component Matrix), it shows that the handicraft factor is not suitable to influence community welfare. Therefore, it can be concluded that handicrafts are not significant to community welfare.

## 2. Analysis of Multiple Linear Regression Results

Based on the partial hypothesis tests conducted, the calculated t-value for natural beauty was  $4.083 > 1.652$  ( $n-207-2=205$  at 5%), and the sig value was  $0.000 < 0.05$ , thus  $H_a$  is accepted and  $H_0$  is rejected, meaning that the value of natural beauty significantly affects the welfare of the community in Lubuk Kertang Village, Langkat Regency. Based on the partial hypothesis tests conducted, the calculated t-value for retribution was  $5.736 > 1.652$  ( $n-207-2=205$  at 5%), and the sig value was  $0.000 < 0.05$ , thus  $H_a$  is accepted and  $H_0$  is rejected, meaning that retribution significantly affects the welfare of the community in Lubuk Kertang Village, Langkat Regency. Based on the partial hypothesis tests conducted, the calculated t-value for tourists was  $3.553 > 1.652$  ( $n-207-2=205$  at 5%), and the sig value was  $0.000 < 0.05$ , thus  $H_a$  is accepted and  $H_0$  is rejected, meaning that tourists significantly affect the welfare of the community in Lubuk Kertang Village, Langkat Regency. Based on the partial hypothesis tests conducted, the calculated t-value for income was  $4.399 > 1.652$  ( $n-207-2=205$  at 5%), and the sig value was  $0.000 < 0.05$ , thus  $H_a$  is accepted and  $H_0$  is rejected, meaning that income significantly affects the welfare of the community in Lubuk Kertang Village, Langkat Regency.

## CONCLUSIONS AND SUGGESTIONS

### CONCLUSIONS

1. The results of the CFA test in the KMO and Bartlett's Test table indicate that the data is valid and can be further analyzed with factor analysis. The Bartlett test value states that the formed correlation matrix is an identity matrix, or in other words, the factor model used is good. In the Rotated Matrix table, it is known that out of the eight

factors, four factors significantly influence the welfare of the community in Lubuk Kertang Village, namely, the value of natural beauty, retribution, tourists, and income.

2. The results of the multiple linear regression show that if the value of natural beauty increases, the welfare of the community will improve; if the retribution increases, the welfare of the community will improve; if the number of tourists increases, the welfare of the community will improve; if the income increases, the welfare of the community will improve. The results of the partial hypothesis test indicate that the value of natural beauty, retribution, tourists, and income significantly affect the welfare of the community in Lubuk Kertang Village, Langkat Regency.

### **SUGGESTIONS**

1. To the community in Lubuk Kertang Village, please continue to preserve the existing potential and maintain the overall natural beauty so that it remains intact and can be utilized optimally without harming the community or visiting tourists, thereby increasing income and positively impacting the welfare of the community.
2. To the community in Lubuk Kertang Village, Langkat Regency, to enhance the supporting facilities at the Lubuk Kertang Mangrove Forest Marine Ecotourism to attract tourists to continue visiting the Ecotourism with sufficiently adequate facilities.
3. To the community, promote the Ecotourism found in Lubuk Kertang Village, Langkat Regency through various media, such as social media, brochures, and so on. This can help introduce the Ecotourism in the village to outside tourists.
4. To the tourists who come to visit, please maintain the cleanliness of the environment, and take care of the facilities and infrastructure provided by the local community. For example, by not littering, maintaining toilet cleanliness, and so on.
5. To the management, please pay more attention to the existing facilities to provide comfort and safety to the visitors.

### **REFERENCE**

- Abidin Sukardi, D. M. (2018). The Potential of Coconut-Based Agroindustry for Community Economic Empowerment in Pangandaran Regency, West Java. *Journal of Agricultural Industrial Technology*, 1–14.
- Adha Panca Wardanu, M. A. (2018). Development Strategy of Coconut Agroindustry as an Effort to Accelerate Community Economy in Ketapang Regency. Ketapang: *Agrista*.
- Adhanari, M. A. (2005). The Effect of Education Level on Farmers' Productivity in Bantul Regency. *Journal of Development Economics*, 76.
- Aditya. (2018). Development of Tourism Villages Based on Local Wisdom. *Journal of Library Science Studies*, 1–12.
- Agung, Y. D. (2018). Structural Equation Modeling (SEM) Analysis of Agricultural Land Conversion and Community Welfare in Kualuh Hilir Subdistrict, North Labuhan Batu Regency. *Undergraduate Thesis, Development Economics*.
- Agus Widarjon. (2016). The Effect of Coal Production on Economic Growth and Community Welfare. *Economics*, 1–63.
- Agus, M. (2017). Analysis of Factors Influencing Tourists in Improving Community Welfare. *Journal of Economics*, 1–16.
- Alfian, Ilham, M., & Hasniah. (2020). Analysis of Cashew Farming Income in Lombe, Watulea Village, Gu Subdistrict, Central Buton Regency. *Economics*.
- Alridiwersah, Risnawat & Aisar Novita. (2019). Utilization of Narrow Land Through Oyster Mushroom Cultivation to Meet Vegetable Needs of Muhammadiyah Orphanage Branch Medan. *UMSU Volume 3*, 1–7.
- Amaliah, R. D. (2017). Analysis of Oyster Mushroom Farming (*Pleurotus ostreatus*) in Simpang Baru Village, Tampan Subdistrict, Pekanbaru City. *Scientific Journal of Agriculture, Vol. 13 No. 2*, 1–12.
- Amar, M. (2019). Factors Influencing the Income of Coffee Farmers in Rumbia Subdistrict, Jeneponto Regency. *Economics*.
- Amelia. (2014). Analysis of Oyster Mushroom Cultivation in Butong Utara Subdistrict, Central Java Regency. *Semarang: Erlangga*.

- Amelia, N. R., Rochdiani, D., & Saefudin, B. R. (2020). Income Analysis of Guava Farming (Getas Merah Variety) in Panyingkiran Village, Panyingkiran Subdistrict, Majalengka Regency. *Agribusiness*.
- Ami, S. (2016). The Effect of Tourist Retribution on the Improvement of Community Welfare in Mangrove Forest Tourism. *Journal of Economics*, 1–25.
- Amir, N. H. (2017). Coffee Farming Analysis in the Giri Senang Forest Farmer Group, Giri Mekar Village, Bandung Regency. *Journal of Agribusiness*, 1–8.
- Andeska, M. (2017). The Influence of Home-Based Oyster Mushroom Cultivation Industry on Community Welfare from an Islamic Economic Perspective (Case Study: Kalirejo Village, Kalirejo Subdistrict, Central Lampung). *Journal of Economics and Business*, 1–123.
- Andriyansyah & Ngurah Marhaeni. (2017). Analysis of the Influence of Small and Medium Manufacturing Business Development on Economic Growth in Kintamani Subdistrict, Bangli Regency. *Economic Growth*, 1–25.
- Annisa Ilmi Faried & Rahmad Sembiring. (2018, January). Service Quality, Infrastructure Development, Capital Access, and Government Policy Analysis on the Welfare Improvement of Coastal Fishermen in Pahlawan Village, Tanjung Tiram Subdistrict, Batu Bara Regency. *Economics*, 3, 15–21.
- Ansyar, A. (2014). Income Difference Analysis Between Landowner-Farmers and Tenant-Farmers in Coconut Sugar Enterprises in Purbosari Village, West Seluma Subdistrict, Seluma Regency. *Bengkulu: Ansyar*.
- Antari & Utami. (2019). Analysis of Factors Affecting Seaweed Farmers' Income. *Development Economics*.
- Aprianingsih, H. E. (2019). The Contribution of Rattan-Based Handicraft Entrepreneurs in Increasing Household Income. *Business Journal*, 1–10.
- Ardika, I. W. (2017). Analysis of Farmers' Welfare Levels in Bangli Village, Baturiti Subdistrict, Tabanan Regency. *Journal of Development Economics*, 1–10.
- Arifini, N. K. (2015). Income Analysis of Silver Craftsmen in Kamasan Village, Klungkung Regency. *Economics*, 1–25.
- Asmoro, H. (2020). Improving the Quality of Forest Farmer Group Empowerment in the Management of Non-Timber Forest Products. *Journal of Social and Forest Economics*, 1–11.
- Asni, N. (2016). Analysis of Factors Affecting Production and Income of Cashew Farming in Parangloe Subdistrict, Gowa Regency. *Development Economics*.
- Asri Rachmat Rosidi, A. M., & Deoranto, P. (2017). Strategic Planning for Copra Agroindustry Development (Case Study in East Halmahera Regency). *Sriwijaya: Rosidi*.
- Astriana. (2018). Income Analysis of Forest Product Managers in Improving the Welfare of Forest Farmer Groups in Suka Tani, West Java. *Empowerment Journal*, 1–21.
- Astuti, R. (2018). Community Cooperation Analysis in Supporting the Management of Wild Forests. *Journal of Agribusiness*, 1–11.
- Astuti, W. Y. (2016). The Influence of Family Socioeconomic Conditions on Student Learning Interest at SMK YPKK 3 Sleman. *Faculty of Economics*, 56.
- Astuti, Y. (2019). Analysis of the Influence of Local Products in Increasing Coastal Community Income. *Journal of Economics*, 1–21.
- Wiranto, A. (2019). The Influence of Farmer Group Cooperation on Improving Welfare. *Journal of Economics*, 1–14.
- Wiratno, I. (2021, November 2). Director General of KSDAE KLHK, Ir. Wiratno M.Sc: I Believe the Community Is Capable of Managing Forests. *Home – INJIWARRIOR*, p. 1.
- WO, A. (2012). Ethnoecological Analysis of Mining, Social Displacement, Vulnerability, and Development in Rural Kenya. *Journal of African Studies Quarterly*, 1–12.
- Wulandari, A. (2019). Land Management in Increasing Community Income. *Journal of Agribusiness*, 1–13.
- Wulandari, I. A. (2016). Utilization of Wonorejo Mangrove Forest as Nature-Based Tourism. *Tourism Journal*, 1–12.
- Wurdiyanti. (2016). The Influence of Family Socioeconomic Conditions on the Learning Interest of Students at SMK YPKK 3 Sleman. *Faculty of Economics*, 63.

- Yanutya, P. A. (2013). Income Analysis of Sugarcane Farmers in Jepon Subdistrict, Blora Regency. *Development Economics*.
- Yudhi Chandra Dwiaji, N., & Hanum, B. (2017). IBM Karang Taruna and Village PKK of Kohod Pakuhaji Through Value-Added Enhancement in Coconut Waste Processing as an Effort to Increase Community Income. *Jakarta: Adiwidya*.