

Quadruple Helix Social Innovation in Labuhan Coastal and Lake Shuji Tourism in PT PHE Upstream Pertamina: West Madura Offshore and Prabumulih Field Case Studies

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Abstract

Ekowisata Pesisir Labuhan on Bangkalan's north shore and Mbak Dewi Shuji Tourist Village in Lembak Muaraenim, South Sumatra, are PT PHE WMO's and PT PEP Prabumulih Region community development projects. Labuhan was initially a mangrove and coral reef protection reserve. The nearby communities dump waste in Shuji Lake. Labuhan Tourism Village and Mbak Dewi Shuji Tourist Village now support the local economy. This raises energy demand and necessity. Labuhan Village and Lembak Village use solar and wind energy as subsectors. Labuhan and Mbak Dewi Shuji tourist villages created by the four actors collaborated. The Quadruple Helix—government, community, corporate or industrial, and academic—collaborates. The study examines how four actors collaborate via Quadruple Helix social innovation. The research is qualitative, using interviews and documentation. The research found that society, PT PHE WMO, PT Pertamina EP Prabumulih Field, Pokdarwis, and academics collaborate well to establish the Tourism Village.

Keywords:

Social Innovation Quadruple Helix, Labuhan Tourism Village, Lake Suji Tourist Village, Pokdarwis, Energy Village Berdikari

Introduction

Tourism has emerged as a prominent cultural phenomenon within Indonesian society. Regardless of whether it pertains to domestic or international travel, Tourism has emerged as an obligatory pursuit undertaken by individuals within a society as a means of alleviating the weariness associated with their daily routines. The presence of a recreational travel population contributes to an increased demand for tourist attractions.

The selection of tourist destinations is influenced by factors such as affordability, convenient locations, distinctive attractions, and the availability of excursions. Additionally, the educational activities offered by these destinations contribute to their appeal among visitors. The tourism industry in Indonesia is seeing significant growth due to its potential to contribute to regional development within the framework of regional autonomy.

The major aim of this development is to enhance the overall welfare of the local population. In addition, tourism has a crucial role in earning foreign currency and creating significant investment prospects. It is unsurprising that when a tourist destination is present in a particular region, the local population often makes concerted efforts to cater to the requirements of the visiting tourists.

The tourism resort has emerged as a popular destination among both local people and immigrants residing in the vicinity. Tourist villages have a distinctive character that serves to accentuate the inherent potential and local cultural

attributes of the surrounding region. The allure of nature lies in its inherent potential and cultural significance, which encompasses both its aesthetic appeal and the opportunity for engaging with local communities and exploring their culinary traditions.

The managerial positions in tourist villages are often filled by individuals who have strong ties to the local community, such as local heroes or community groups. For a village to be classified as a tourist village, it must meet certain requirements. These criteria encompass the distinctive potential and appeal of tourism, which is characterized by a rural environment that remains in its original state, as well as the social and cultural vitality of a typical community that has been conserved.

The establishment and growth of the tourist village, aimed at conserving natural beauty and fostering social interactions, originated from community-led efforts that subsequently collaborated with other entities such as government bodies, academic institutions, corporations, and industries. These four actors must develop a cohesive collaboration that possesses a certain degree of capability in generating innovation and constructing the tourist village.

The establishment and advancement of tourism villages inherently entail the involvement of several stakeholders. The participation of stakeholders encompasses various aspects, including management, employment, development of tourist attractions, and the empowerment of the community to capitalize on the opportunities that emerge from the presence of tourism villages. The objective of this study is to examine the collaborative dynamics among four key actors within the framework of the Quadruple Helix model of social innovation. Specifically, this research focuses on the Labuhan Coastal Ecowisata Village situated on the northern coast of Bangkalan, as well as the Shuji Dewi Mbak Tourism Village located in Muaraenim Lembak Village, South Sumatra.

Literature

Village tourism encompasses the integration of attractions, accommodations, and supportive services into the framework of community life, thereby harmonizing with prevailing norms and traditions. Joshi (year) defines rural tourism as a form of tourism that encompasses a range of rural experiences, including natural features, customs, and many other aspects that collectively possess the capacity to attract tourists (Antara & Sukma 2015).

Tourist villages are constructed with a focus on national identity. In instances where the absence of constituents, namely local communities, resources, and tourists, is observed. The harmonic interaction between these three components is asserted. The enhanced enthusiasm for community development is evident in the establishment of an organizational framework that caters to societal aspirations. Additionally, efforts are made to ensure the sustainability of the physical environment through conversion, promotion, and the cultivation of a harmonious purpose of life that aligns natural resources, cultural resources, and human resources.

Furthermore, there is a focus on identifying and harnessing the potential of these resources. In terms of the advancement of village tourism, there are three potential approaches: public self-governance, collaboration with either prominent or small-scale companies, and assistance from non-governmental organizations (NGOs) or educational institutions, particularly in cases when the community is deemed incapable of achieving self-sufficiency.

Community empowerment schemes often target tourist communities, with the local community assuming the role of the primary actors while outsiders are regarded as collaborators. This approach is frequently observed in such contexts. In order for a village to effectively cater to tourists, it is imperative to establish and maintain a robust framework for tourist development and village management. The analysis commences with an examination of the products offered by the tourist village, followed by an evaluation of the criteria used to assess the village's appeal. Subsequently, the development technique employed to enhance the village's capability within the community is explored.

Additionally, attention is given to the strategies employed for packaging, marketing, and branding the rural tourism village's property. The village tourism offering comprises four key components: attractiveness, affordability, support amenities, and social organization or institution. The emergence of energy-independent tourism villages has been observed as a consequence of the development of tourist villages. These villages are characterized by their ability to generate and utilize independent energy resources, which serves as a notable draw for tourists visiting the area. Social innovation refers to the process of developing and implementing novel solutions to address social challenges and improve societal well-being. It involves the creation and use of innovative ideas, strategies, and The quadruple helix

model is a conceptual framework that aims to capture the complex interactions and interdependencies among academia, industry, government, and society in the context of innovation.

One of the challenges hindering the progress of the tourist village is the community's struggle to cultivate innovative tourism initiatives that leverage the hamlet's inherent potential. However, these circumstances do not pose a hindrance to the expansion of tourist settlements. The establishment of tourist communities necessitates the collaborative efforts of several stakeholders. In order to address the challenges faced by village tourism and identify potential avenues for the village community's benefit, it is imperative to foster innovation and encourage collaboration. The aforementioned partnership is commonly referred to as the quadruple helix model. The model integrates the perspectives and input of all actors and stakeholders in order to develop and execute strategies for evaluating new initiatives aimed at enhancing the local economy through tourism.

According to Imron (2020), Kimatu (2016) argues that the emergence of the quadruple helix model may be attributed to the forces of globalization and the widespread adoption of the Internet. This model has facilitated a notable amplification of public participation and engagement. The quadruple helix model is deemed to be a superior framework in comparison to the triple helix model, which encompasses academia, government, and industry. Civil society refers to the collective body of individuals and organizations that are independent from the government and engage in various forms of social, political, These four performers are required to collaborate in a cohesive manner.

The optimization of collaboration is vital to ensure that each participant fulfils their designated responsibilities, facilitating the realization of the intended objectives in the establishment of creative industries, specifically in the context of a tourist town. The government plays a crucial role in facilitating the growth of tourism in a given area. One of its primary responsibilities is to ensure the provision of essential infrastructure and services that are necessary for the place to thrive as a tourist destination (Resdiana & Dari 2019). In addition to ensuring the provision of essential necessities, the government also assumes responsibility for overseeing the legal aspects pertaining to the establishment of tourist village areas. This includes the issuance of tourism village permits, the registration of community-based tourist organizations, and other legal requirements aimed at promoting the long-term viability of these villages. Furthermore, an entrepreneur, business, or industry refers to an individual or entity engaged in commercial endeavors, responsible for managing and operating a business. This entails economic activities such as the production and distribution of goods and services.

The potential culprits may also include legally established corporations that conduct business within the jurisdiction. Furthermore, it is important to consider the perspective of scholars and researchers in this context. The academic profession is characterized by expertise in one or more specialized subjects. Academics engage in a significant number of instructional activities, including lecturing and facilitating discussions. These activities are often carried out in educational institutions such as universities and colleges. Additionally, academics also contribute to the advancement of knowledge through research and publishing their findings in academic journals. .

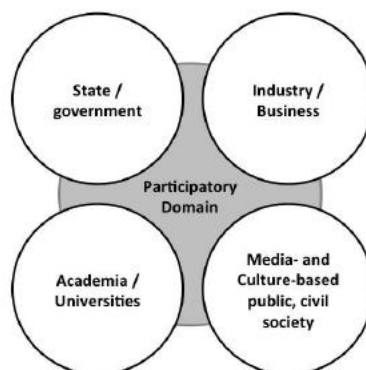


Figure 1. Model Quadruple helix
Source: (van waart et al, 2016).

Method

This research uses descriptive qualitative research methods. The secondary data is a report of activities and publications produced in connection with the program of Labuhan Coast Tourism Village and Shuji Dewi Mbak Tourist Village. Labuhan Beach Ecowisata Village is located in the North Coast of Bangkalan which is the work area of the West Madura Offshore Energy First Hulu and Mbak Dewi Shuji Travel Village, located in Muaraenim Village, South Sumatera which is a work region of the EP First Prabumulih Field.

Result & Discussion

Pesisir Labuhan Village

The energy generated by these systems is derived from renewable sources, including geothermal heat, wind power, bioenergy, solar radiation, hydroelectricity, and the kinetic and thermal gradients of the ocean. The energy self-catering hamlet is a tourism destination that boasts the unique feature of independent energy production. The energy generated is adapted to match the energy capacity of the hamlet. The implementation of autonomous energy production can serve as a unique and appealing feature for the village, attracting tourists and offering prospective opportunities for the development of village tourism. Labuhan Coast Ecowisata Village is a community development programme being created and promoted by PT First Hulu Energy West Madura Offshore, with the aim of establishing energy-independent tourist communities. The primary objective of the Labuhan Coast Ecosystem Village is to conserve the coastal ecosystems of Sepulu while actively engaging the participation of the local communities.

The 2014 campaign initiated by the World Meteorological Organization (WMO) focused on urging the community to preserve 17,000 mangrove seeds and bushes in response to the degradation of mangrove forests caused by activities such as mangrove harvesting, hunting, and abrasion. The restoration of this mangrove ecosystem is anticipated to result in the recovery of around 17.5 hectares of severely degraded mangrove forest. After the conservation efforts, the program persists in the development of the mangrove educational park with the aim of transforming it into a prominent tourist destination. Additionally, the program focuses on the conservation of coral reefs and actively contributes to the collection of data pertaining to adaptation and mitigation strategies. These endeavors are aligned with the objective of supporting the realization of pro-climate villages as part of the KLHK climate village program by August 2021. The current zoning plan in Labuhan's ecological area comprises two distinct sections: the Coral Reef Conservation, spanning 8 hectares in the western region, and the Mangrove Conservancy, covering 45 hectares in the eastern area.

These designated zones serve multiple purposes, including education, research, and tourism related to marine parks and mangrove ecosystems, respectively. The tourist village of Labuhan offers several attractions in the form of distinct rides on its roadways within each designated region. The Labuhan Coast Ecosystem Village utilizes energy through the use of alternative energy sources such as solar cells and hybrid solar cell installations, also known as bayu. These energy sources are employed to facilitate the effective management of the Mangrove and Coral Reef ecosystem region in Labuhan Village.

The program generates a power output of 5.5 kilowatts and effectively mitigates emissions by up to 7.5 metric tonnes of carbon dioxide equivalent each year. The "Solar Cell Flood Ecowisata" initiative not only focuses on the implementation of solar panels but also encompasses the exploration of alternative wind energy sources to facilitate the sustainable management of tourism areas. The alternative energy program was established as a subsidiary component of the Labuhan village tourism program. The installation of a single solar cell in Labuhan Village is anticipated to contribute to the expansion of the alternative energy program. This development enables the community to effectively harness energy from solar cells and wind power, hence enhancing the potential for emissions reduction.

Mbak Dewi Shuji Village

Mbak Dewi Shuji Tourism Village is the name of the Community Development Program from First EP Prabumulih Field. Mbak Dewi Shuji Tourist Village is located in Muaraenim Valley Village, South Sumatra. Construction and development of the Mbak Dewi Shuji Tourism Village will begin in 2020. The tourist village was originally pioneered by the local people of the valley village. In the village of Lembak there is a lake called Lake Shuji, until 2020 the lake was used by the public as a dumping site and not properly ined. The year 2020 also coincided with the outbreak of COVID-19 that left the people of Lembak village to lose their jobs at the triplex factory.

Then the community, the taruna coral with the local hero initiative to clean up the Shuji lake of garbage and rejuvenate the area around the lake so that it can be used as a local tourist spot for the community surrounding the lake.

Unexpectedly, after the area around the lake was renovated and made a tourist destination, Dana Shuji became viral on social media and gained attention from people outside the village of Lembak Muaraenim.

Then to support the tourist site of Lake Shuji, local heroes and the community gave a proposal to the company First EP Prabumulih Field to jointly develop the lake Shuji as a tourist destination. The construction of the tourist village of Mbak Dewi Shuji will begin in 2020 with the main focus being the formation of groups and the improvement of infrastructure. As for the attractions offered by Mbak Dewi Shuji Tourist Village are the availability of campgrounds by the lake, garbage management education, and fire-response education. During the operation of Mbak Dewi Shuji Tourism Village, the village was only open to the public from morning to afternoon. The operating hours were limited due to the limited access to electric lighting in the Mbak Dewi Shuji Tourist Village. Then, in order to overcome the limited electricity restrictions, the local community and the First Person made the addition of infrastructure such as solar panels to capture sunlight which can then be used for electricity production in the tourist village. The existence of the solar panel and the utilization of renewable energy sources is what became one of the subsectors of the village of mbak Dewi shuji tourism as a self-sufficient energy tourism village.

Discussion

Analysis of Social Innovation According to the Quadruple Helix Model

Labuhan Coast Ecowisata Village and Mbak Dewi Shuji Tourist Village have similarities to their villages. The similarity is that these two tourist villages are equally present as a result of the cooperation of society, industry or business, academics and government. The energy of Pesisir Labuhan Ecowisata Village comes from the combination of solar and hybrid power, while the Mbak Dewi Suji Tourism Village of comes from solar power. The Quadruple Helix model on Labuhan Coast Ecosystem Village is reflected in the respective roles of the four actors.

First, the government. In Labuhan village, the government plays a role on the licensing legality side of Labuhan tourist village operations. The government through the Tourism Service also provides institutional support. The Sadar Tourist Group from Labuhan Village has been registered with the local Tourism Service. Labuhan Tourism Village has also become an educational icon in Bangkalan and can be formally ordered by the government and the general public.

Labuhan village already has a website used for their tourist village marketplace under the name bakao.id. Second, industry or business. Industry or business actors who play a role in the labor village are PT PHE WMO. The first is to be a partner who acts as a facilitator of the community to build Labuhan tourist village. The first also provides infrastructure support as well as conservation of mangrove and coral reefs. Third, academics. The role of academics is as the party that supports Labuhan village from the implementation of knowledge.

The preservation of mangroves and coral reefs as well as other fauna in Labuhan village provides knowledge of the conservation needs needed by the community. Academics from the university are also not seldom conducting real work lectures as well as making the labor village as a student research venue. Fourth, the community or civil society. The role of the community or civil society is as the main actor in the construction of the tourist village Labuhan. The community as the manager carries out the operational activities of tourist villages.

Local heroes also disseminate knowledge through seminars, workshops, and training collaborations from both the government and the private sector. The community also carried out innovations on tourist travel and also formulated a tourism development strategy of Bangkalan district in cooperation with the Regional Government. In order to preserve the sustainability and independence of Labuhan Tourism Village, PHE WMO conducted financial management training and other technical aspects for the Environmental Awareness Group (POKDARWIS), conducted a Public Satisfaction Index Survey, SROI, and other routine surveys as a step of the company's exit strategy from Labuhan Ecowisata Village program.

Labuhan village already has a website used for their tourist village marketplace under the name bakao.id. Thus, the sustainability and independence of Labuhan Tourist Village can be maximized. The Quadruple Helix model of the Mbak Tourist Village of the Shuji Goddess is reflected in the respective roles of the four actors.

First, the government. In the Muaraenim Village, the government plays a role in the licensing legality side of the operation of the Shuji Devi Mbak Tourism Village. The government through the Tourism Service also provides institutional support. The Sadar Tourist Group of the Mbak Tourist Village of the Shuji Devi has been registered with the local Tourism Service.

Second, industry or business. Industry or business actors who play a role in the Mbak Tourism Village of the Devi Shuji is the Pertamina PT EP Prabumulih Field. Pertamina became a partner who played a role as a facilitator of the community to be able to build the Mbak Dewi Shuji tourism village.

Pertamina also provided infrastructure support as well as improving the infrastructure of the campsite ground. The Pertamina also carried out training related to the management of the organization, response to fire disasters, training of the template of the shirt, and the training of garbage management.

Third, academics. The role of academics is as the party that supports Mbak Dewi Shuji Tourism Village from the implementation of knowledge through training in collaboration with Pertamina EP Prabumulih Field.

Fourth, the community or civic society. The role of community or civil society is as the main actor of the construction of the village tourism Mbak Dewi Shuji. Local heroes also disseminate knowledge in seminars, workshops, and training collaborations from both the government and the private sector. As for the community group formed, the Sadar Tourism Group is responsible for the digitization of the Mbak Dewi Shuji Tourist Village and the maintenance of facilities.

Conclusion

The establishment of Labuhan Coast Ecowisata Village and Mbak Dewi Shuji Tourism Village may be attributed to the collaborative efforts of the local community, industry and commercial sectors, academic institutions, and the government. Subsequently, both of these tourist settlements derive their energy from sustainable and renewable sources. The energy sources utilized in Pesisir Labuhan Ecowisata Village comprise a hybrid power system that combines solar energy with other sources. Conversely, the energy supply in Mbak Dewi Shuji Tourism Village solely relies on solar power. The implementation of the quadruple helix model in these two communities demonstrates a collaborative approach that has the potential to positively impact the quality of life for the local population. The sustainability of the independence of the Labuhan Coast Ecosystem Village and the Mbak Dewi Shuji Tourist Village is anticipated to be upheld through the collective efforts of the four players involved in the collaboration.

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Biographies

Hengky Rosadi is Pertamina EP Prabumulih Field's Community Development Officer. He graduated from Sriwijaya State Polytechnic with the PT Bukit Asam Fellowship Programme at D3 Electronics in Ahli Madya Teknik and continued with the Salemba Empat (KSE) Karya Beasiswa Programme with Donatur PT PLN Persero in Bachelor of Applied Engineering. He plunged into the social world of high school with the establishment of a social community of societies and joining the national NGO that moves in the field of Empowerment of the Community and Humanity. He has carried out community devotion stunts on more than 14 Indonesian borders, bringing down 700 volunteers from across Indonesia in various cross-disciplinary concepts of education, health. He serves as Community Development Officer (CDO) also loves CSR, so he is always happy and enjoys implementing and planning the company's CSR programmes.

Amarullah is working in Pertamina EP Cepu Zona 11, with a position as Communications Relations and Community Involvement Development. He graduated from IPB University Bogor, majoring in Agricultural Social Economics. He is social worker in the field of community development in various companies including: State Gas Company, Mineral Mining, Plantation, Palm Oil and Oil Gas Company, the northern coastal region of West Java Province and i Gresik Regency and Bangkalan Regency.

Ulil Masruroh is a Community Development Officer PT Pertamina Hulu Energi West Madura Offshore. She earned Bachelor of social in Department of Social Development and Welfare from Gadjah Mada University. She has experienced 4 years in oil & gas industry majoring in community development and external relation. She has published journal about Conservation and Empowerment "The Role of PHE WMO CSR in Empowering Coastal Communities in Labuhan, Bangkalan" and several other journal. She has been a speaker several times to share knowledge with several companies and students regarding community development. Ulil has completed many community empowerment project at Gresik and Madura, East Java.

Erwin Hendra Putra hold Bachelor degree in Public Administration University of Sriwijaya. His expertise in Public Relation & Community Development/Senior Officer at Pertamina EP Prabumulih Field. He managed his career at sustainability/CSR/Community Development, particularly in Inovasi Sosial Lembak Desa Wisata Danau Shuji dan Burai Desa Wisata.