



Implementation of Ergo-Tourism and Local Wisdom to Design Tourism Village Governance Based on Balinese Culture in Darma Buana, Belitang II South Sumatera Province

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Abstract. This study aims to determine the implementation of the exploration stage carried out by stakeholders and local communities regarding the importance of ergo-tourism-based ecotourism governance design while preserving a harmonious environment with the local wisdom of Balinese culture-based tourism villages in Darma Buana Village. The research method used is ergonomics participatory action research, with an ergo-tourism and local wisdom approach, data collection through interviews, observations, and focused group discussions based on total ergonomics and ergo- entrepreneurship training. Action research was provided to stakeholders: members of the Tourism Awareness Group, members of the Prosperous Youth Movement, and local communities. The results showed that there is potential for natural tourism destinations and local wisdom, relaxation, arts and culture, family and religion. Darma Buana Village Tourism has the potential to be developed, so it is necessary to pay attention to ergo-tourism-based ecotourism governance and local wisdom as a form of prevention of environmental and tourist risks and safety. The research recommendation is to implement the integration of ergo-tourism and local wisdom as an ecotourism governance plan. Darma Buana Village managers need to improve digital branding by utilizing attractive social media content and massive updates based on Balinese culture, the uniqueness of customs as a portrait of a small Bali on the island of Sumatra, the implementation of ergonomic principles with a practical, comfortable, safe, healthy, and efficient orientation in every ecotourism work activity and local wisdom so that it is increasingly known and visited.

Keywords: Tourism village, ergo-tourism, local wisdom, governance, ergo-entrepreneur

INTRODUCTION

Tourism development in Indonesia is ongoing, including efforts to encourage tourist villages to develop and become independent, certified, and sustainable. In recent years, tourism has become a priority for private sector growth, without realizing that mass tourism to the

environment and arts and culture has a significant impact on the welfare of the community in the tourist area. Darma Buana Village has interesting tourism potential and several forms of local wisdom, such as organizing cultural exhibitions, arts, Rejang Dance, Kecak Dance, Tarani, carving exhibitions, and bonsai plants. This is unique, especially for tourists from outside the region and even Western tourists who want to visit nature and culture-based tourism in an environment unaffected by Westernization (Tovmasyan, 2019). However, on the other hand, the impact of mass tourism in Darma Buana Village has an impact on the environment and cultural values if no control can control it even though local communities and tourists both want to preserve the environment and culture, but paradoxically, the presence of tourists can threaten what they want to preserve (Awaloedin et al., 2024; Ismatillaevna et al., 2023). Darma Buana Village can be categorized as ecotourism, a small part of sustainable tourism activities. Ecotourism is contextualized in the local environment significantly to evaluate the interconnection between nature and local communities to meet the goals of environmental conservation and meet the needs of local communities (Ade et al., 2024; Indragiri et al., 2022; Ecotourism & Park, 2021).

The Balinese culture-based tourism village of Darma Buana is concerned about the decline in the preservation of values, culture, and the environment due to tourist activities. Therefore, environmental conservation resilience is needed. Binaan et al. (2022) examined the problems of ecotourism management from the perspective of community-based ecotourism with a focus on analyzing the application of the 5 principles of community-based Ecotourism (CBE), with the results showing that the community has not been seriously sought to be implemented in ecotourism management. Therefore, ecotourism governance is needed to actively contribute to maintaining nature conservation (Apriani et al., 2020). Ecotourism activities require joint participation to care for each other and the environment of the local community stakeholders. Creating an ergonomic tourism environment with ENASE (effective, comfortable, safe, healthy, efficient) can create a feeling of satisfaction for tourists because the essence of tourists traveling is to minimize the burden of stress. Therefore, as tourism stakeholders, it is important to understand the meaning and function of ergonomics in the tourism sector (ergo-tourism) (Setiawan et al., 2023).

Ergo-tourism is a scientific discipline that studies humans and their activities and work in tourism work areas. Ergonomics that reviews all aspects holistically is Total Ergonomics (ET), which is associated with the tourism industry to obtain a complete knowledge of optimal

human-technology interaction problems by applying the identification of 8 ergonomic problems, applying appropriate technology using the SHIP (systemic, holistic, interdisciplinary, participatory) approach (Candra et al., 2023). Ergo-tourism should address water and food shortages, inefficient energy use, population and waste, and rapid urbanization (Wani & Nagaraj, 2022; Mia et al., 2021).

Ecotourism governance is integrated with ergonomic aspects in its development. In tourist destinations, ergonomic aspects that are important to consider are safety and comfort because ergonomics plays an important role in determining environmental quality. Ergonomic standards for environmental conditions that ease unhealthy postures, exposure to temperature, humidity, lighting, noise, air, odor, and water pollution are measurable.

Not only as an effort to increase nature conservation, ecotourism also plays a role in preserving local wisdom. Local wisdom is a cultural advantage of the local community and geographical conditions that should be continuously used to guide life (Nurjaya, 2024; Risfandini & Yulianto, 2023). Their values and beliefs influence the attitude of local communities in caring for the environment. Their beliefs are reflected in environmental ethics that guide people's lives on how to treat them (Karnawijaya et al., 2022). Through a sustainable tourism approach, synergy is needed between efforts to preserve nature and culture and their heritage to support the acceleration of national development. This research aims to support tourism development strategies based on aspects of ergo- tourism-based ecotourism governance and local wisdom in Balinese culture-based tourism villages in Darma Buana Village.

Ecotourism has the following basic principles (Rosyanafi et al., 2023; Pekon et al., 2020): (1) Nature Based products and markets based on nature; (2) Ecologically sustainable, sustainable implementation and management; (3) Environmentally educative, environmental education for managers and visitors; (4) Beneficial for local communities; (5) Provide satisfaction for tourists. Harmonization creates these principles through the application of RE to create an ENASE environment that is more productive and improves the quality of life (Soelistianto et al., 2024). Safe and comfortable conditions in the tourism sector are physical and psychological needs. Because in general, tourist destination facilities do not have ergonomic standards that refer to appropriate technology. In the industrial world, the service provider (human) factor is important in determining tourist satisfaction. The ability of service providers to provide services quickly, precisely, effectively, and efficiently is inseparable from the physical, mental, environmental, workload, and work organization of service providers. In the principle of

ergonomics, fitting tasks to the man must be implemented to balance tasks and human abilities, abilities and limits in carrying out activities. For this reason, efforts are needed to minimize work stress, injury, and the risk of illness so that the services provided will remain optimal (Amri et al., 2024; H Setiawan & M Rinamurti, 2020). Information technology can support the information process precisely and accurately. In this case, displaying content containing information about tourist destinations is one of the implementations of ergonomics to make it easier for tourists to read and avoid tourist fatigue and boredom. Ergonomic principles in tourism activities, in this case, what is considered (Ketut et al., 2023; Gde et al., 2024): (1) The type of tourist activity carried out, whether in the category of activities with heavy, medium or light loads; (2) The tools used whether they meet the rules of safety and comfort; (3) The use of time in carrying out activities does not exceed the physical and psychological capacity of tourists. The concept of ergo-tourism based on local wisdom is the interaction between tourists and local communities due to the strength of the cultural attractiveness of the destination. The interaction is divided into three types of cultural attributes: (1) Physical, for example, built heritage; (2) General (daily life of local people); (3) Specific cultural activities of local people (for example, rituals and festivals).

METHODS

The research method is ergonomics participatory action research (EPAR) with an ergo-tourism approach and local wisdom, and data collection is done through interviews, observations, and Focused Group Discussions (FGDs) based on Total Ergonomics (ET) and ergo-entrepreneurship training, action research provided to stakeholders; members of the Tourism Awareness Group (Pokdarwis), members of the Prosperous Youth Movement, and local communities. This research emphasizes participatory engagement as an active subject directed at solving the problem of empowering the research subjects (El-shebeens et al., 2023; H Setiawan & M Rinamurti, 2021). As for achieving research objectives, EPAR is supported by observation, in-depth interviews, and RE-based FGDs. The informants in this study were the Village Head, the Head of Pokdarwis, and the general public. At the same time, the participants in the RE-based FGDs consisted of Pokdarwis members and young people who were active in village activities. The research process focuses on efforts to find ergo-tourism-based ecotourism governance and local wisdom as important factors in developing tourism sustainability in Balinese culture-based tourism villages in Darma Buana Village, OKUT South Sumatera

Province.

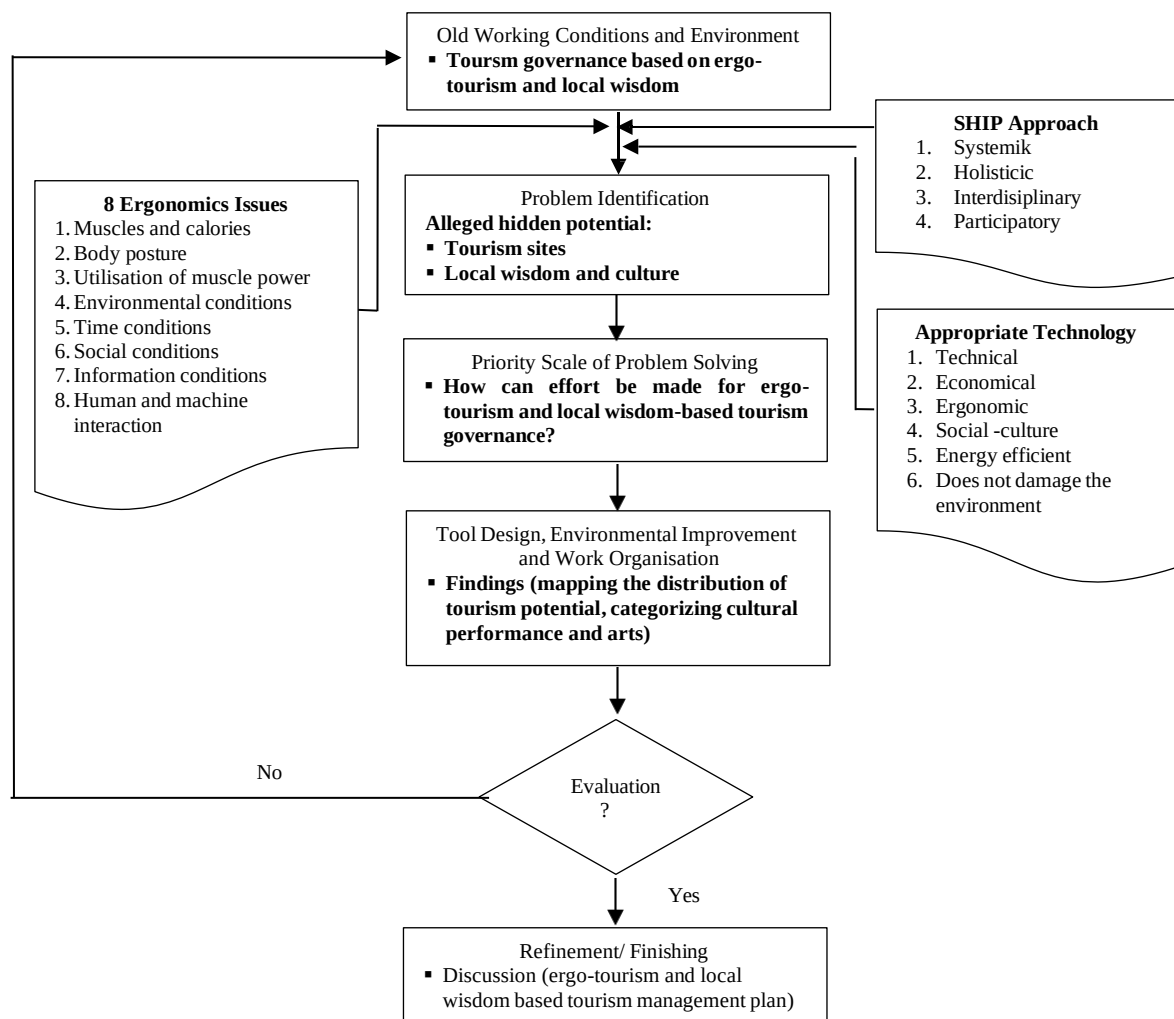


Figure 1: Research Schematic Diagram of Integration of Total Ergo-Tourism and Local Wisdom

The research flow was adapted from the research model (Setiawan, 2023) with the following explanation: (1) During the observation process in the field and supported by several references to ergonomic design theory in the research ‘the use of ergonomic design principles in recreational area equipment (Kusuma et al., 2024; Hari & Setiawan, 2020) and also refers to the research “local wisdom that underlies the development of sustainable tourist village” (Kurniawan, 2024); (2) The results of observations identified the potential of natural tourism and local wisdom that was not exposed. So that action steps are needed; (3) Researchers raise questions to be conveyed in FGDs and ETs, which are containers in the EPAR method process; (4) The findings are supported by data collected from observations, in-depth interviews, and

FGDs and ET's; (5) In the last stage, providing reflections to FGD and ET participants as a form of awareness of the importance of ergonomic and local wisdom-based tourism governance to realize sustainable tourism. Valid and credible data results using triangulation techniques adapted from Nurjanah (2024). This technique compares observation data with interview data about tourism potential and tourism development plans in Darma Buana Village, then compares the perspectives of opinions and views of informants such as educated people, the general public, and government people.

DISCUSSION

Darma Buana Village is in Belitang II Sub-district, East Ogan Komering Ulu (OKUT) Regency, South Sumatera. The village covers an area of 325.75 hectares with a population of approximately 1,112 people and 265 households. Darma Buana Village has a geographical area in the form of land consisting of residential areas, plantations, and rice fields and passed by the Belitang River. 99.8% of the population of Darma Buana Village adheres to Hinduism. In religious life, awareness of religious worship, especially Hinduism, is very well-developed (Village Profile, 2023). Darma Buana Village looks like villages in Bali Province, with temples in every corner of the residents' houses, so it is often referred to as a miniature portrait of Bali on the island of Sumatra. In addition, the community still adheres to customs in their daily lives. Darma Buana Village often becomes an attraction during traditional celebrations. It is not uncommon for several guests from among officials to visit this village. This makes the village, where most of the population work as farmers and artists, worthy of being a tourist village and a destination for local and foreign tourists. Every year, the village organises the Ogoh-Ogoh Festival, and every five years, the village organises mass Ngaben activities that are attended by people outside the OKUT area. Every Indonesian Independence Day celebration, Darma Buana tourism village organizes cultural exhibitions, such as Balinese art performances, carving exhibitions, and bonsai plants (Ganesha, 2022; (Dalam & Bali, 2021). The potential of Balinese culture-based tourism village destinations in Darma Buana Village is one of the sectors that must be developed to introduce the advantages of a region, which will ultimately create a competitive advantage.

Ecotourism governance based on ergo-tourism and local wisdom in Darma Buana Village with a variety of natural potential and cultural wisdom that is still maintained to this day is unique, but in its development, it is necessary to improve governance both from stakeholders

and local communities to improve the quality of public services, advance the community's economy, and overcome development gaps between villages with the development of ecotourism governance. In this case, ecotourism governance refers to the ergonomic aspect of creating a tourist environment that is ENASE while preserving local wisdom values. The determination of criteria using FGD and ET methods involving business people, Pokdarwis, and the youth of Darma Buana Village through the ergo-tourism approach obtained results as in Table 1.

Table 1. Data from FGD and ET Results

Aspects of Ergo-Tourism	Proposed Refinement/Finishing Plan
Ergonomics in tourism destination facilities	Efforts to improve excellent service in the field of land transport, certified tour guides
	Livable home stay
	Health facilities
Ergonomics in service	Traveller and local community health tracking services
Ergonomics in information and communication technology	Creating promotional content, especially on social media, that follows trends both from displays that include layout, writing style, and images contained in promotional content
Ergonomics in tourism activities	Provide ergo-entrepreneurship education or training before conducting a venue visite route in the tourist destination area.
	Provide venue visite route equipment
	Provide supporting facilities in the tourist facility area

In addition, the ergo-tourism concept is expected to switch to a digital system, considered to be easy for the process of developing potential village services, and is expected to be able to reduce costs (cost reduction) for tourists. To create a more ENASE experience for tourists and residents. So activities are needed to support ergonomic ecotourism governance through digitalization as follows: (1) Digital monography, supporting an integrated information system between applications, big screen monitors, and SIMDESA that contains statistics on village government, village natural resources, village human resources, village economy, education, and geographical conditions of a village area; (2) Digitalisation of homestays, supporting homestays to connect with many customers digitally; (3) Digitalisation of ticketing systems at venues, supporting digital ticket transaction management, both onsite and online transactions; (4) Digitalisation of BUMDes business, supporting BUMDes business by digitalising the transaction process; (5) Digitalisation of Travel Agent, supporting conventional

travel agents to be able to market business digitally; (6) E-ergotourism application, which aims to provide information on ergonomic aspects that have an ENASE impact on travel; (7) e-bike application, to facilitate bicycle rental to save energy and health; (8) Virtual tour, a virtual journey supported by multimedia elements such as sound effects, music, narration, and text.

The local wisdom-based ecotourism governance is packaged with various Balinese ritual salvation activities and Balinese cultural art kebyar performances, such as organizing Ogoh-Ogoh Festival activities, mass Ngaben activities, cultural exhibitions, Balinese art performances, carving exhibitions, and bonsai plant exhibitions. It is believed that holding a selamatan ritual ceremony is related to the belief in forces beyond humans that help preserve the environment. Figure 2 presents the variety of tourism potential of Darma Buana Village..



Figure 2. The variety of tourism potential of Darma Buana Village

CONCLUSION

The attractiveness of the various potentials of the Balinese culture-based tourism village in Darma Buana Village is very potential to be developed. Still, it pays attention to ecotourism governance that harmonises the implementation of ergo-tourism integration and is based on local wisdom. Ergonomic ecotourism governance is intended to create an ENASE environment but also utilize technology to be more connected and accelerate access to information services so that it is more efficient. In addition, it still preserves local wisdom including Balinese cultural customs.

Optimisation of local wisdom to maintain ecotourism in Darma Buana Village is packaged with various ritual activities of Balinese cultural customs and Balinese cultural art

kebyar performances such as organising Ogoh-Ogoh Festival activities, mass Ngaben activities, cultural exhibitions, Balinese art performances, carving exhibitions, and bonsai plant exhibitions. These activities are in line with the study of ecotourism development which is packaged by respecting the values of local wisdom where local people have the belief that by holding ritual ceremonies in Balinese cultural customs related to belief in forces outside humans who help preserve the environment. Thus, strengthening the value of local wisdom is a barrier to the flow of modernisation that can damage the environment of Balinese culture-based tourism villages in Darma Buana Village.

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