



Exploring the potential of natural resources and cultural heritage in Karimun regency (Indonesia): the road to sports tourism development

Exploración del potencial de los recursos naturales y el patrimonio cultural en la regencia de Karimun (Indonesia): el camino hacia el desarrollo del turismo deportivo

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Abstract

Introduction: The problem in this study is that there is still a lot of potential for sports tourism that has not been developed and utilized properly, this is because there is no effective activity program related to sports tourism.

Objective: The purpose of this research is to analyze the potential of Natural and Cultural Resources for the development of sports tourism in Karimun Regency, Indonesia.

Methodology: This research is a type of qualitative research. The focus of this research is 1) analyzing the potential of natural resources including the physical state of nature, natural advantages, and natural uniqueness, for the development of sports tourism, 2) analyzing cultural potential including Karimun culture and uniqueness for the development of sports tourism, and 3) analyzing government support and policies for the development of sports tourism.

Results: The results showed that Karimun Regency has great potential to develop natural and cultural resource-based sports tourism. Through good management and appropriate policy support, sports tourism can provide significant economic, social, and cultural benefits to local communities, while promoting Karimun Regency as a leading sustainable tourism destination. Statistical analysis in this qualitative research provides an overview of the distribution of themes that help in designing sports tourism development strategies in Karimun Regency.

Conclusions: This finding concludes that it shows that each tourist attraction has a distinctiveness that can be positioned according to the dominant theme that emerges. With a data-driven approach and the involvement of local communities, this strategy can strengthen cultural identity, expand tourism markets, and support sustainable regional economic development.

Keywords

Natural Resources, cultural heritage, sports tourism.

Resumen

Introducción: El problema en este estudio es que aún existe mucho potencial para el turismo deportivo que no ha sido desarrollado y utilizado adecuadamente, esto se debe a que no existe un programa de actividades efectivo relacionado con el turismo deportivo.

Objetivo: El objetivo de esta investigación es analizar el potencial de los Recursos Naturales y Culturales para el desarrollo del turismo deportivo en la Regencia de Karimun, Indonesia.

Metodología: Esta investigación es un tipo de investigación cualitativa. El objetivo de esta investigación es 1) analizar el potencial de los recursos naturales, incluido el estado físico de la naturaleza, las ventajas naturales y la singularidad natural, para el desarrollo del turismo deportivo, 2) analizar el potencial cultural, incluida la cultura y la singularidad de Karimun, para el desarrollo del turismo deportivo, y 3) analizar el apoyo y las políticas gubernamentales para el desarrollo del turismo deportivo.

Resultados: Los resultados mostraron que la Regencia de Karimun tiene un gran potencial para desarrollar el turismo deportivo basado en los recursos naturales y culturales. Mediante una buena gestión y un apoyo político adecuado, el turismo deportivo puede proporcionar importantes beneficios económicos, sociales y culturales a las comunidades locales, al tiempo que promueve la Regencia de Karimun como destino turístico sostenible líder. Y el análisis estadístico de esta investigación cualitativa proporciona una visión general de la distribución de los temas que ayudan a diseñar estrategias de desarrollo del turismo deportivo en la Regencia de Karimun.

Conclusiones: La conclusión de este hallazgo es que muestra que cada atracción turística tiene un carácter distintivo que puede ser posicionado de acuerdo con el tema dominante que emerge. Con un enfoque basado en datos y la participación de las comunidades locales, esta estrategia puede reforzar la identidad cultural, ampliar los mercados turísticos y apoyar el desarrollo económico regional sostenible.

Palabras clave

Recursos naturales, patrimonio cultural, turismo deportivo.

Introduction

Sports tourism has emerged as a significant global phenomenon, integrating traditional and modern sports to create new economic opportunities while promoting local cultures and preserving unique sporting traditions (Ramos-Álvarez et al., 2024; Van Rheenen et al., 2017). This phenomenon not only creates new economic opportunities but is also a medium to promote local culture and preserve unique sporting traditions. Many regions in Indonesia, which are rich in natural and cultural resources, have a golden opportunity to develop the sports tourism sector so that the development of community sports can be preserved and provide benefits to the community.

Regions rich in natural and cultural resources, such as Karimun Regency in Indonesia, have enormous potential to develop sports tourism, which can contribute to economic growth, cultural preservation, and community development (Go & Kang, 2023; Salim & Svetlana, 2019). With the increase in visitors, both domestic and foreign, the local economy gets a significant injection of funds. Therefore, many regions have begun to strategize to attract sports events, which have the potential to become a new source of revenue (Boonsiritomachai & Phonthanukitithaworn, 2019). This is in line with the government's efforts to develop the tourism sector as one of the drivers of the national economy (Scarlett, 2021). Sports tourism covers a wide range of activities, from international sporting events to adventure tourism involving extreme sports (Tohmo, 2018). This phenomenon is becoming increasingly important to support sustainable economic development. One of the strategies to increase development and economic progress is through the tourism sector with a primary focus on utilizing natural resources and local wisdom (Nyikana & Tichaawa, 2018). Over time, tourism has become an integral part of life and has a special role, especially for low- and middle-income communities (Pedauga et al., 2022). As a very important and integrated element in a country's development strategy, the concept of tourism is no longer limited to just a means of releasing boredom, finding a livelihood, or as a lifestyle, both from the perspective of tourism actors and consumers (Mandic et al., 2018).

One of the tourism segments that has the potential to increase the number of tourist visits and have a positive impact on economic income is sports tourism (Raso & Cherubini, 2023). Melo & Sobry, (2017) various ways are done by the government to increase tourist visits to their country, one of which is through sports tourism. Sports tourism has the same goal as tourism in general, namely getting excitement and eliminating boredom due to work. Sports tourism offers elements of challenge and competition that cannot be separated from the characteristics of the sport itself (Tembi, 2018). By combining several elements, such as natural resources and local wisdom, sports tourism creates a unique identity and attraction for tourists. Tourists make visits because of an interest in an area that they consider to provide a new experience in traveling. Tomik et al., (2014) revealed that there are two types of tourists involved in sports tourism, namely passive tourists who visit because they want to get new experiences, while active tourists visit because they are interested in the environment offered and include it in routine visits.

Sports tourism can be divided into types based on objects, namely a) tourism for culture (cultural tourism), b) health tourism (recreational tourism), c) trade tourism (commercial tourism), d) political tourism (political tourism), e) social tourism (social tourism), f) religious tourism (religion tourism) and g) sports tourism (Sport Tourism). Tourism and sports are "two domains of study that can be brought together to create cooperation and a positive impact on Indonesia's overall economic growth (Yakup & Haryanto, 2021). Sport Tourism, a form of tourism that focuses on individual travel to witness a specific sporting event in a particular location, has attracted considerable attention from local governments, the private sector, the sports industry, and the general public (Van Rheenen et al., 2024). Therefore, sports tourism is now a significant focus as a potential economic driver capable of providing multiple benefits.

In sports tourism activities, two types of tourists can be identified, namely, passive tourists who visit to get new experiences, while active tourists come because they are interested in the environment offered and include these activities in their regular visit agenda (Tomik et al., 2014). In addition to presenting sports competitions and natural beauty, the provision of prizes or rewards in the competition is one of the factors that attract tourists. In contrast to traditional vacation concepts that often do not provide clear feedback, sports tourism provides added value, especially in terms of economy. As such, the goal of participation in sports tourism is not only focused on financial expenditure but also on the increased

financial aspects that can be achieved through the experience. As previously explained, the sports tourism sector has yet to receive adequate development, especially in smaller regions. Sports tourism tends to be organized more often by big cities. To activate the potential of sports tourism in these areas, serious efforts are needed from the state, especially the attention and cooperation of local governments in optimizing sports tourism.

The development of an area requires the participation and active role of the government to explore and develop the tourism potential in the area, one of which is Karimun Regency, this Regency is located within the Riau Islands region, is an area rich in natural and cultural resources with great potential for the development of sports tourism. Geographically, Karimun Regency consists of several islands with varied landscapes, ranging from sandy beaches, and mangrove forests, to waters rich in biodiversity. This creates unique opportunities for the development of various water sports activities such as diving, snorkeling and sailing. According to Gjertsen, (2022) the utilization of this abundant geographical potential can be used as a strategy to develop sports tourism that can attract domestic and foreign tourists. Karimun Regency benefits from its strategic location between two neighboring countries, Malaysia and Singapore. Both countries are major destinations for international tourists, especially Singapore, which is not only a business center but also a strong economic region.

The development of sports tourism in Karimun Regency does not only focus on physical aspects and location but can utilize the existing cultural wealth to enrich the tourist experience. Studies in the international literature show that culture has an important role in creating the identity of a destination, which directly impacts tourist interest in visiting (Fletcher et al., 2017). By utilizing cultural resources, Karimun can create added value for its tourism industry, which in turn can have a positive impact on the local economy. Cultural diversity in Karimun Regency also plays an important role in the development of the tourism sector. The people of Karimun have a rich and diverse culture, the result of interaction between various ethnicities and communities. Local traditions, belief systems, and unique arts and crafts offer authentic experiences for tourists.

Despite these advantages, the potential of sports tourism in Karimun Regency is still undeveloped due to the lack of effective activity programs and infrastructure (Liberato et al., 2021). The integration of natural and cultural resources into sports tourism can create a distinct identity for the region, in line with global trends in sustainable tourism (Hinch et al., 2016). However, there is a need for comprehensive research to explore how these resources can be utilized to develop sports tourism, ensuring economic, social, and environmental benefits. Existing literature highlights the economic and cultural benefits of sports tourism (Raso & Cherubini, 2023; Yuan et al., 2022), but few studies have focused on smaller regions such as the Karimun Regency, where natural resources are abundant but underutilized. While research (Tembi, 2018) emphasizes the role of sports tourism in local economic development, there is limited exploration of how natural and cultural resources can be synergized to create unique sports tourism experiences in the region.

According to data collected from BPS Riau Islands, from July to September 2023 foreign tourists have reached 71.99%, namely 12,909 tourists entering Karimun. An increase in the number of tourist visits from abroad has a positive impact on economic growth and development, both on a national and micro scale. Therefore, it is necessary to develop tourism properly, this is by the research results Nyikana et al., (2018) show that, in general, sports tourism contributes significantly to economic development and plays an important role in the promotion of the region. This study provides critical lessons for local governments and relevant authorities in tourism and sport regarding policy formulation and planning around sports tourism events. In particular, there is a need for local governments to further capitalize on sports tourism events for the expansion of benefits to local communities.

Strengthening infrastructure is also key in supporting the development of sports tourism. Improving transportation access to tourist sites, and providing information centers, and water sports equipment rental facilities are aspects that should not be ignored. Research shows that good infrastructure can accelerate the growth of the number of tourists leaving the region (Liberato et al., 2021). Invested in ports, docks, and public facilities from around the coast serve to support the comfort and safety of tourists while doing activities at sea. Furthermore, the preservation of marine ecosystems in Karimun Regency is also part of the development of sustainable sports tourism. Good management and conservation

of coral reefs and marine life must be a priority to ensure that this natural beauty is maintained. Environmental education and awareness for tourists and local communities have great potential to encourage a shared responsibility to protect these precious natural resources.

Thus, the potential of natural resources in Karimun Regency provides a strong foundation for the development of sports tourism, through a good marketing strategy and investment in infrastructure, as well as attention to environmental preservation, Karimun can be transformed into a leading destination for water sports lovers. The development of local culture-oriented sports tourism in Karimun Regency is a strategy that prioritizes the integration of traditional, regional arts, and sports activities. Traditional sports festivals, as one form of implementation of this development, are not only a forum for cultural celebrations but also have the potential as a tourist attraction that attracts visitors from various segments. These activities allow local communities to participate while educating visitors about their rich culture, including the rituals, music, and dances associated with traditional sports (Lin & Lee, 2020).

Based on the potential problems of sports tourism in Karimun Regency, the researcher aims to conduct research on the potential of natural and cultural resources for the development of sports tourism, so that sports tourism in Karimun Regency can be recognized by tourists by offering natural and cultural beauty. The results of the study (Hinch et al., 2016) show that sports tourism is estimated to help build a unique identity that is closely related to the region's sustainability goals, representing the natural and cultural beauty that can be emphasized through sports initiatives, while, when such efforts are included in broader sustainability plans, the destination profile can be significantly improved. Overall, the analysis of the potential of natural and cultural resources in Karimun Regency indicates that a combination of both can create sports tourism that not only increases local revenue but also strengthens local culture and ensures environmental sustainability. Thus, it needs the seriousness of all parties to ensure that sports tourism can be developed properly so that the management of tourist areas as sports tourism destinations, can attract tourists from both outside and local to come to Karimun Regency, Indonesia.

Method

Research Design

This research used a qualitative exploratory approach to analyze the potential of natural and cultural resources for sports tourism development in Karimun Regency, Indonesia. Qualitative methods were chosen to gain in-depth perspectives from stakeholders and contextualize the unique socio-cultural and environmental dynamics of the region (Sugiyono, 2013). The research design was guided by the frameworks of sustainable tourism development (Hinch et al., 2016) and community-based tourism (Giampiccoli & Saayman, 2018) which emphasize local participation and policy integration.

Study Participants

Purposeful sampling was used to select 25 key informants, including Local government officials (5) from the Karimun Tourism and Sports Agency. Community leaders (8) involved in cultural preservation (e.g., Jong Boat and Gasing Berembang practitioners). Tourism business owners (7) operating near Batu Li-mau Beach and Tanjung Hutan Hot Springs. Travelers (5) who participate in sports tourism activities.

Inclusion Criteria: At least 5 years of experience in the relevant field or directly involved in sports tourism initiatives.

Ethical Considerations

Informed consent from all participants was obtained. Anonymity was guaranteed by using pseudonyms (e.g., "Tourism Official A"). Approval was obtained from the Semarang State University Research Ethics Committee (Ref: UNNES/2023/ETH-045).

Data collection techniques

Data collection techniques were conducted using semi-structured interviews (60-90 minutes each) which are discussed as follows:

- 1) Perceptions of natural/cultural resource potential.



- 2) Challenges in sports tourism development.
- 3) Policy and infrastructure needs.
- 4) Field observations at four key locations (Batu Limau Beach, Tanjung Hutan Hot Springs, Perahu Jong, and Gasing Berembang) to document activities, visitor interactions, and environmental conditions.
- 5) Document analysis of government reports (e.g., related to regional tourism policies).

Data analysis technique

Data were analyzed using thematic analysis (Christou, 2022) with NVivo 12 software to ensure rigor:

-Transcription and Coding: Interview transcripts were inductively coded to identify emerging themes (e.g., “cultural uniqueness”, and “sports infrastructure gaps”).

-Triangulation: Findings from interviews, observations, and documents were cross-verified to increase validity.

-Statistical Supplementation: Frequency analysis that measures the distribution of themes (e.g., Table 1) to prioritize development strategies.

Results

Based on the results of field observations, 4 tourist destinations were found that have very high potential to be developed further to attract tourists from both outside and locally to come to Karimun Regency, in the country of Indonesia, including the following:

Tanjung Hutan Hot Springs

Hot springs are generally found in mountainous or highland areas. Located in the lowlands on a small island in Tanjung Hutan Village, Buru District, Karimun Regency, Riau Islands Province, this bathing place offers significant uniqueness. Unlike the natural hot springs in many other areas, the hot water in Tanjung Hutan does not contain sulfur. This tourist destination has great potential to become a major attraction for tourists, both domestic and foreign, given its unique value. With its strategic location, it also has the potential to become a top choice for individuals seeking a means of relaxation or stress relief from the hectic routine of urban life. In addition, the stunning natural scenery in Tanjung Hutan Village provides an aesthetic added value that is very attractive to visitors.

Figure 1. Tanjung Hutan Hot Springs



Batu Limau Beach

Batu Limau Beach, located in Karimun Regency, has several famous rocks, including rocks that resemble male and female genital organs, batu bilik (which in Malay means room), batu kapal, batu limau, batu keris, batu pengantin, and several other rock shapes.

Figure 2. Batu Limau Village Beach



Jong Boat

The Jong boat game is a small boat that does not require a crew, is small in size, and resembles a miniature sailboat, whose movement depends on the direction of the wind. This activity has existed for hundreds of years, during the era of the kingdoms of Johor, Pahang, Riau, and Lingga. In making Jong boats, pulai metangoh wood is used, which is known for its softness and resistance to breakage, making the carving process easier. Each component of a Jong boat has a specific function to support its smooth operation on the water.

Figure 3. Jong boat



The first part is the body or body of the boat which serves as a place to attach the sail and later axle. Furthermore, the soak Jong serves to break the waves of the water through which the boat passes. The chapter house, located in the boat section, serves as the fulcrum of the kater axle, ensuring that the Jong boat remains stable and does not easily sink when sailing. The fourth part is the Jong cap, which serves to protect the boat from incoming water. The jeep boom is the fifth component used to tie the jeep from the tip to the top two-thirds of the sail. The Jong sail, which is the sixth part, serves to catch the wind and propel the boat forward quickly. The jeep, as the seventh part, serves to contain the wind at the front of the boat and steer the Jong boat. Finally, the eighth part, the axle and the water located in the center of the boat serves to keep the boat balanced. In terms of size, a small Jong is about 130 centimeters long, while a medium-sized Jong is about 160 centimeters long, and a large Jong is about 190 centimeters long.

Inflated Gasing

Permainan gasing merupakan salah satu tradisi budaya yang telah lama dikenal di Kabupaten Karimun, sebagai salah satu permainan tradisional, tidak hanya mencerminkan kearifan lokal, tetapi juga menjadi bagian integral dari warisan budaya masyarakat Melayu di daerah ini. Di Kabupaten Karimun, gasing memiliki beragam jenis, dan salah satu yang paling terkenal adalah gasing berembang, yang telah diakui dan terdaftar sebagai produk dengan Hak Atas Kekayaan Intellectual Property Rights (HAKI). The spinning top has a distinctive shape with a large size and weight, made of durable high-quality wood. In this game, the players will spin the top using a special rope, and the goal of the game is to keep the top spinning as long as possible above the ground. Apart from being a game, the spinning top is also often used

in various traditional ceremonies and cultural celebrations, symbolizing resilience and patience. Over time, the spinning top is not only seen as a traditional game, but also has great potential to be developed as part of culture-based sports tourism. Karimun Regency has a great opportunity to develop the top game, especially the spinning top, as a unique sports tourism attraction. With the recognition of HAKI, gasing berembang now has a higher value, that allows it to be preserved as well as promoted to tourists, both domestic and international.

Figure 4. Inflated Gasing



Frequency analysis of themes in the development of sports tourism in the district based on natural and cultural resources:

Figure 5. Diagram Batang Frequency analysis of themes in sports tourism development in Karimun district

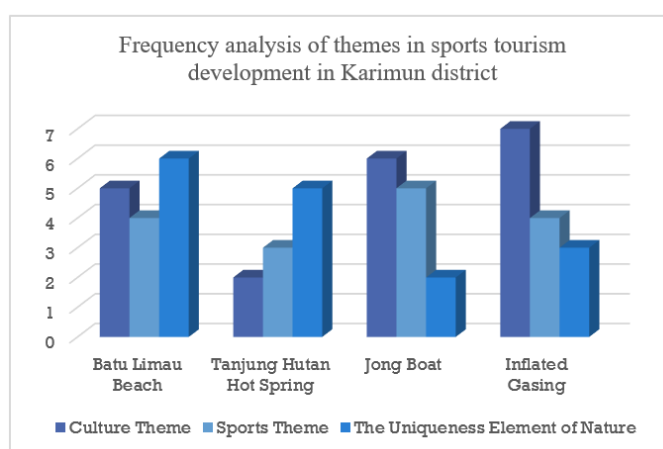


Table 1. Frequency of Sports Tourism Development Themes in Karimun Regency Based on Natural and Cultural Resources

No	Destinations	Culture Theme	Sports Theme	The Uniqueness Element of Nature
1	Batu Limau Beach	5	4	6
2	Tanjung Hutan Hot Spring	2	3	5
3	Jong Boat	6	5	2
4	Inflated Gasing	7	4	3

The frequency results displayed in Figure 5 above found that Gasing Berembang contained the most cultural themes (7 occurrences), indicating the dominance of traditional values and cultural heritage in community narratives. Batu Limau Beach and Tanjung Hutan Hot Springs stand out in the category of natural uniqueness, which reinforces natural attractiveness as tourism development capital and is suitable to be developed as outdoor-based sports tourism. Perahu Jong scores highly in both the cultural and sports categories, signaling its dual potential in educational and recreational activities. Descriptive

statistics show that the dominance of cultural themes in objects such as Gasing Berembang and Perahu Jong provides a strong opportunity to build local culture-based destination branding. The unique natural elements of Batu Limau Beach and Tanjung Hutan Hot Springs can be positioned in special interest tourism markets such as ecotourism and wellness tourism. The combination of sports and cultural themes, as in Perahu Jong, contributes to a broader appeal in destination promotion.

Discussion

Based on the data analysis that has been previously stated, it can be stated that the discussion in this study is that the development of sports tourism potential based on natural and cultural resources in Karimun Regency can be a promising effort to increase the tourist attractiveness of the area. This finding is in line with the views of Hinch et al., (2016) who emphasize the importance of integration between cultural elements and sports activities in forming an authentic and sustainable tourism experience. Some of the attractions that have great potential in the development of sports tourism are Batu Limau Beach, Tanjung Hutan Hot Springs, Perahu Jong, and Gasing Berembang which are described as follows:

Batu Limau Beach

Batu Limau Beach, located in Batu Limau Village, Karimun Regency, is unique in the form of large rocks that resemble various shapes, such as room-shaped stones, brides, pans, and limes. The existence of stones with this unique shape provides attraction for tourists. The potential of Batu Limau Beach can be developed as a location for beach sports such as beach volleyball and other water sports. In addition, the natural beauty of this beach can be utilized for nature photography activities, as well as festivals or cultural events involving the local community. This approach can increase tourist visits both domestic and foreign. This is in line with the research of Mousavi et al., (2022) which says that sports tourism can play an important role in destination development and local cultural preservation through branding and promotion based on natural resources and local culture.

Tanjung Hutan Hot Springs

Tanjung Hutan Hot Springs, located in Tanjung Hutan Village, Buru District, has great potential as a health and relaxation tourism destination. The uniqueness of this hot spring is that it is located in the lowlands and does not contain sulfur, in contrast to hot springs in general. This potential can be developed to become a sports tourism destination that focuses on health and natural therapies, such as yoga, meditation, and other relaxation activities. This hot spring can also be used as a place for various therapeutic programs and healthy water sports. This is in line with the opinion of Chang et al., (2020) which states that sports tourism can be used as a tool to promote sustainable destinations by combining elements of health and relaxation.

Jong Boat

Jong Boat, which is a traditional game of the Malay people in the Riau Islands, has great potential in the development of sports tourism. Using miniature boats controlled by the wind, this game can be part of the cultural and water sports festival in Karimun Regency. The development of the Jong Boat race, as well as workshops on its creation and operation, can be a tourist attraction that not only engages tourists but also provides space for the younger generation to get to know the local culture. Giampiccoli & Saayman, (2018) also emphasize the importance of involving local communities in the development of culture-based tourism to create better relationships between tourists and local communities, which in turn supports tourism sustainability. This is in line with a study by Esfehni & Albrecht, (2018) which identified that the development of culture-based sports tourism can play a role in the preservation of local culture while enhancing the regional tourism sector.

Inflated Gasing

Inflated Gasing holds great potential as a regional cultural tourism icon. Through the right strategy, this game can be revived not only as traditional entertainment but also as a tourist magnet that strengthens local cultural identity. The development of culture-based tourist destinations like this not only increases tourist visits but also strengthens the community's pride in their ancestral heritage.

The Karimun Regency government's policy in supporting the development of sports tourism also plays an important role in this regard. The Karimun Regency Government is also active in introducing new attractions, such as Pelawan Beach, which can be part of a natural and cultural resource-based sports tourism package. According to research conducted by Yuan et al., (2022) the development of culture-based sports tourism can have a significant impact in terms of improving the local economy and cultural preservation. Sports tourism combined with local culture will enrich the tourist experience while adding value to the preserved culture. In addition, according to Hunter, (2020) the development of culture-based sporting events can strengthen local identity and create new business opportunities that support regional economic sustainability. Thus, the development of gasing berembang in the context of sports tourism will be a strategic step to introduce Karimun Regency to the outside world.

Furthermore, research (Font et al., 2023) revealed that the development of culture-based sports tourism can increase tourist attraction and have a positive impact on the local economy. They emphasized the importance of utilizing the potential of local culture in creating an authentic and attractive tourist experience for visitors. In addition, a study by (Yuan et al., 2022) showed that integrating cultural heritage in sports tourism products can strengthen local identity and attract tourists seeking unique experiences. They suggested the importance of collaboration between the government, community, and private sector in designing and implementing programs that promote cultural heritage through sports activities. By integrating the potential of local nature and culture in sports tourism, Karimun Regency can create a tourist destination that not only attracts tourists, but also introduces and preserves local cultural wealth to future generations.

The analysis presented earlier shows that the distribution of this theme indicates the specific potential of each tourist attraction to be developed according to its characteristics. Gasing Berembang and Perahu Jong are strong in cultural and traditional aspects, which can be formulated as part of a cultural festival or traditional race. On the other hand, Pantai Batu Limau and Air Panas Tanjung Hutan can be directed towards relaxation-based sports tourism and ecotourism. This is in line with the views of Chang et al., (2020) who emphasize the importance of integration between physical activities and authentic locally-based experiences in building sustainable tourism destinations.

Conclusions

Based on the results of research and discussion, it can be concluded that the development of sports tourism based on natural and cultural resources in Karimun Regency has great potential to increase tourist attraction, both domestic and international. Attractions such as Batu Limau Beach, Tanjung Hutan Hot Springs, Perahu Jong, and Gasing Berembang, which are rich in natural uniqueness and local culture, offer opportunities to be used as an integral part of sports tourism destinations. This development could include beach sports, water sports, and health and relaxation activities that utilize natural resources, such as non-sulphur hot springs. In addition, the preservation of local culture through traditional games such as Perahu Jong and Gasing Berembang, which have been registered in HAKI, can increase added value as culture-based tourist attractions. Karimun Regency government policies, through Regent Regulations and support for outstanding athletes and training, also support the development of this sports tourism. The recognition of intellectual property rights (HAKI) for traditional games demonstrates a commitment to preserving and promoting local culture.

Furthermore, the findings show that each tourist attraction has a distinctiveness that can be positioned according to the dominant themes that emerge. With a data-driven approach and the involvement of local communities, this strategy can strengthen cultural identity, expand tourism markets, and sustainably support regional economic development. Limitations The findings of this study are specific to the Karimun Regency and cannot be generalized to other regions. Travelers' perspectives are limited to a small sample; future research could include surveys to gain greater insight.

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Conflict of Interest

We as authors affirm that there is no conflict of interest in this publication and that the manuscript has been approved and submitted by all the authors mentioned above.

References

- Boonsiritomachai, W., & Phonthanukitithaworn, C. (2019). Residents' support for sports events tourism development in Beach City: The role of community's participation and tourism impacts. *Sage Open*, 9(2), 2158244019843417.
- Chang, M.-X., Choong, Y.-O., & Ng, L.-P. (2020). Local residents' support for sport tourism development: The moderating effect of tourism dependency. *Journal of Sport & Tourism*, 24(3), 215–234.
- Christou, P. A. (2022). How to use thematic analysis in qualitative research. *Journal of Qualitative Research in Tourism*, 3(2), 79–95.
- Esfehani, M. H., & Albrecht, J. N. (2018). Roles of intangible cultural heritage in tourism in natural protected areas. *Journal of Heritage Tourism*, 13(1), 15–29.
- Font, X., Torres-delgado, A., Crabolu, G., Martinez, J. P., Kantenbacher, J., Miller, G., Font, X., Torres-delgado, A., Crabolu, G., & Martinez, J. P. (2023). The impact of sustainable tourism indicators on destination competitiveness : the European Tourism Indicator System The impact of sustainable tourism indicators on destination competitiveness : the European Tourism Indicator System. *Journal of Sustainable Tourism*, 31(7), 1608–1630. <https://doi.org/10.1080/09669582.2021.1910281>
- Giampiccoli, A., & Saayman, M. (2018). Community-based tourism development model and community participation. *African Journal of Hospitality, Tourism and Leisure*, 7(4), 1–27.
- Gjertsen, T. (2022). A Review of Studies of Small-Scale Sport Tourism in Rural Communities and Regions, with Focus on Leverage, and the Role the Organization of Small-Scale Sport Tourism Events Play in Business and Community Development in the Host Communities. *International Perspectives on Sport for Sustainable Development*, 69–93.
- Go, H., & Kang, M. (2023). Metaverse tourism for sustainable tourism development: Tourism Agenda 2030. *Tourism Review*, 78(2), 381–394. <https://doi.org/10.1108/TR-02-2022-0102>
- Hinch, T. D., Higham, J. E. S., & Moyle, B. D. (2016). Sport tourism and sustainable destinations: foundations and pathways. *Journal of Sport and Tourism*, 20(3–4), 163–173. <https://doi.org/10.1080/14775085.2016.1254139>
- Hunter, W. C. (2020). Annals of Tourism Research Syncretism and indigenous cultural tourism in Taiwan. *Annals of Tourism Research*, 82(November 2019), 102919. <https://doi.org/10.1016/j.annals.2020.102919>
- Liberato, D., Liberato, P., & Moreira, C. (2021). The Role of Sports Tourism Infrastructures and Sports Events in Destinations Competitiveness. *Springer Proceedings in Business and Economics*, 127–144. https://doi.org/10.1007/978-3-030-72469-6_9
- Lin, Y. H., & Lee, T. H. (2020). How the authentic experience of a traditional cultural festival affects the attendee's perception of festival identity and place identity. *International Journal of Event and Festival Management*, 11(3), 357–373. <https://doi.org/10.1108/IJEFM-12-2019-0061>
- Mandic, A., Mrnjavac, Ž., & Kordic, L. (2018). Tourism infrastructure, recreational facilities and tourism development. *Tourism and Hospitality Management*, 24(1), 41–62. <https://doi.org/10.20867/thm.24.1.12>
- Melo, R., & Sobry, C. (2017). Introducing sport tourism: New challenges in a globalized world. In *European Journal of Tourism Research*. <https://doi.org/10.54055/ejtr.v16i.273>

- Mousavi, R., Najafabadi, M. O., Mirdamadi, S. M., & Hosseini, S. J. F. (2022). Rural sports and local games: missing link between sports tourism development and sustainability. *Journal of Sport & Tourism*, 26(3), 201–223.
- Nyikana, S., & Tichaawa, T. M. (2018). Sport tourism as a local economic development enhancer for emerging destinations. *EuroEconomica*, 37(2), 76–89.
- Pedauga, L. E., Pardo-Fanjul, A., Redondo, J. C., & Izquierdo, J. M. (2022). Assessing the economic contribution of sports tourism events: A regional social accounting matrix analysis approach. *Tourism Economics*, 28(3), 599–620.
- Ramos-Álvarez, O., García-Romero, C., & Arufe-Giraldez, V. (2024). 20 años de investigación científica de la revista Retos, nuevas tendencias en Educación Física, Deportes y Recreación: análisis bibliométrico (20 years of scientific research by the journal Retos, new trends in Physical Education, Sports and Recreation: a bibliometric analysis). *Retos*, 54, 355–361. <https://doi.org/10.47197/retos.v54.102798>
- Raso, G., & Cherubini, D. (2023). Sport Tourism and Regional Economic Development. *Scientific Journal of Sport and Performance*, 3(1), 108–121. <https://doi.org/10.55860/jkwx7277>
- Salim, B. T., & Svetlana, M. (2019). The Impact of Dimensions of Marketing Information Database in the Promotion of Marketing Innovation Relying on Marketing Capabilities. *Advances In Economics and Management*, 2, 57–61.
- Scarlett, H. G. (2021). Tourism recovery and the economic impact: A panel assessment. *Research in Globalization*, 3(April), 100044. <https://doi.org/10.1016/j.resglo.2021.100044>
- Sugiyono, D. (2013). Metode penelitian pendidikan pendekatan kuantitatif, kualitatif dan R&D.
- Tembi, M. (2018). Sport tourism as a local economic development enhancer for emerging destinations. *EuroEconomica*.
- Tohmo, T. (2018). The economic impact of tourism in Central Finland: a regional input–output study. *Tourism Review*, 73(4), 521–547. <https://doi.org/10.1108/TR-04-2017-0080>
- Tomik, R., Gorska, K., Staszkievicz, A., & Polechonski, J. (2014). Motives for participation in active sport tourism – participants of holiday windsurfing camps. *Baltic Journal of Health and Physical Activity*. <https://doi.org/10.2478/bjha-2014-0021>
- Van Rheenen, D., Cernaianu, S., & Sobry, C. (2017). Defining sport tourism: a content analysis of an evolving epistemology. *Journal of Sport and Tourism*, 21(2), 75–93. <https://doi.org/10.1080/14775085.2016.1229212>
- Van Rheenen, D., Naria, O., Melo, R., & Sobry, C. (2024). Sport Tourism, Island Territories, and Sustainable Development: A Literature Review. *Sport Tourism, Island Territories and Sustainable Development*, 59–82.
- Yakup, A. P., & Haryanto, T. (2021). Pengaruh Pariwisata terhadap Pertumbuhan Ekonomi di Indonesia. *Bina Ekonomi*. <https://doi.org/10.26593/be.v23i2.3266.39-47>
- Yuan, C., Gan, L., & Zhuo, H. (2022). Coupling mechanisms and development patterns of revitalizing intangible cultural heritage by integrating cultural tourism: The case of Hunan Province, China. *Sustainability*, 14(12), 6994.

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