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Digital Mapping Information System for Gastronomic and Wellness Travel Patterns in the Pangandaran Tourism Area

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ABSTRACT

This research is motivated by the lack of digital information introducing the potential of gastronomic and wellness tourism in the Pangandaran tourist area. In addition to its abundant marine tourism potential, this area also has gastronomic and wellness tourism potential. Information systems are crucial in tourism to attract tourists to visit tourist destinations. This study aims to design a digital information system in the form of an e-catalogue mapping gastronomic and wellness tourism in Pangandaran, which includes maps, travel patterns, and information descriptions. This e-catalogue can support the Pangandaran area in marketing its tourism product potential. The research method used is descriptive qualitative with data collection techniques including observation, interviews, and documentation studies. The focus of the e-catalogue design is on gastronomic and wellness tourism activities that can be experienced in Pangandaran, providing information related to the supporting components of tourism trips, namely amenities, accessibility, and other supporting services. Future research can develop this information system using virtual reality and augmented reality for a more interactive information system.

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1. INTRODUCTION

This research begins with the understanding that digital information regarding the potential of gastronomic and wellness tourism in the tourist area of Pangandaran Regency is still lacking. The tourist area of Pangandaran Regency, which is already widely known for its marine tourism potential, also has equally attractive gastronomic and wellness tourism potential. The development of the gastronomic and wellness sectors can enhance tourist appeal and promote sustainable tourism in a region (C. Ningsih, 2016; Darsana, 2021; Resmi, I., C., et al 2023). However, this potential appears to have not been fully explored or introduced to the public, motivating this research

The use of digital information systems in the tourism industry has significantly transformed this sector, with both positive and negative implications for sustainability (Gössling, 2019). Digitalization has facilitated information access for tourists, but it has also created new challenges in managing and preserving tourist destinations (Buhalis & Law, 2008; Cuevas, R.P, 2017; Demartini, M., 2018). This industry has experienced two distinct periods of development—digitalization and innovation—driven by the introduction of new technologies such as smartphones, drones, and wearable devices (Suyunchaliyeva et al., 2020). In this context, information technology has been widely applied to meet information needs, study behaviors and performance, manage operational processes, and drive innovation (Khatri, 2019). Furthermore, the framework of digital information systems in tourism also contributes to the development of more effective marketing strategies to attract tourists (Xiang et al., 2015).

The primary objective of this research is to design a digital information system in the form of an e-catalogue. This e-catalogue is designed to encompass all important aspects related to gastronomic and wellness tourism in Pangandaran Regency, from maps showing tourist locations and travel patterns that can be followed by tourists, to detailed and engaging information descriptions about each location and activity. With the presence of this e-catalogue, it is hoped that tourists will gain a clearer and more detailed understanding of what the tourist area of Pangandaran has to offer, especially in terms of gastronomic and wellness tourism. The main focus in designing this e-catalogue is on gastronomic and wellness tourism activities that can be enjoyed in Pangandaran, as well as information related to supporting components of travel such as amenities, accessibility, and other supporting services.

Through this research, we aim to create an e-catalogue that contains tourist maps and detailed information about tourism resources in Pangandaran Regency. This e-catalogue will later be accessible to the general public, allowing the presented information to reach more people and providing a clearer and more detailed picture of what Pangandaran Regency offers in the field of gastronomic and wellness tourism. Additionally, this research also proposes ideas for further development of this digital information system. In the next stage of development, this system can be enhanced by adopting modern technologies such as virtual reality and augmented reality. With the advent of these technologies, tourists will not only receive information but also enjoy a more interactive and engaging experiences. This will help enhance Pangandaran's appeal as a gastronomic and wellness tourism destination and ultimately assist in promoting and improving the recognition of gastronomic and wellness tourism potential in Pangandaran. Through this research, we hope to introduce and promote the potential of gastronomic and wellness tourism in Pangandaran to the public. We believe that with better information and more engaging experiences, tourists will be more inclined to visit and enjoy all the beauty and uniqueness that Pangandaran has to offer, which will ultimately help boost tourism and the local economy in this area.

2. LITERATURE REVIEW

2.1. Gastronomy Tourism

Gastronomy tourism, a concept that has developed over the past few decades, is now recognized as a key component of cultural tourism (Kuhn, V.R, 2023; Vázquez-Medina et al., 2023). This type of tourism involves the exploration of local culinary traditions and values, and is often associated with activities such as agritourism and gastronomic festivals. This form of tourism not only satisfies and educates tourists in the art of traditional cuisine but also brings economic benefits to local communities (Marius et al., 2018). Local food plays a crucial role in enhancing tourist satisfaction and promoting the region (Gürsoy, 2017; Hsu, F.C., 2020; C. Ningsih., 2023; Bessi, V.G., 2022). Culinary experiences can enhance the attractiveness of a destination and build a strong cultural identity (Hall and Sharples, 2003; C. Ningsih, 2021). Furthermore, gastronomic tours often serve as a means to support local agriculture and environmental sustainability (Hjalager, 2010). Recent research by Kivela and Crotts (2006) emphasizes that gastronomic experiences involve not only taste but also social and emotional aspects that can enrich the overall travel experience.

2.2. Wellness Tourism

Wellness tourism, as a form of healthy lifestyle within the tourism environment, encompasses various dimensions such as diet, fitness, social interaction, cultural diversity, health awareness, and self-development (Težak Damijanić, 2019). It represents an innovative service in the hospitality industry, focusing on preventive health actions and mental well-being development (Sylchuk et al., 2023). The role of health in contemporary tourism is to enhance psycho-physical capacity, health, and satisfaction, with an emphasis on preventive programs, physical exercise, fitness, and beauty (Andrijašević & Bartoluci, 2004). The concept of health tourism has a long history, but its recent growth has been associated with modern societal challenges and the increasing availability of health experiences (Smith & Kelly, 2006). Research by Chen et al. (2019) emphasizes the importance of wellness tourism in meeting the psychological needs of tourists seeking to escape the stress and pressures of everyday life. Furthermore, promoting wellness tourism can contribute to sustainable development by raising awareness of health and community well-being (Connell, 2018).

2.3. Tourism Travel Patterns

Various studies have explored systematic travel patterns, focusing on specific populations and factors. Graham et al. (2018) highlight the experiences of the elderly in rural areas, emphasizing the importance of everyday travel both practically and symbolically. Jing et al. (2018) discuss the application of the Random Regret-Minimization model in sustainable travel modes and route choice behavior, underscoring the need for sustainable transportation systems. Cats (2024) provides a comprehensive review of human mobility patterns using smart card data, identifying intra- and interpersonal variability in travel patterns. Macmillan et al. (2013) emphasize the need for evidence-based transportation decisions, using organizational travel plans to demonstrate the potential for systematic reviews in this field. Research by Timms et al. (2019) also shows that planned and organized travel patterns can enhance tourist experiences and minimize negative impacts on the environment.

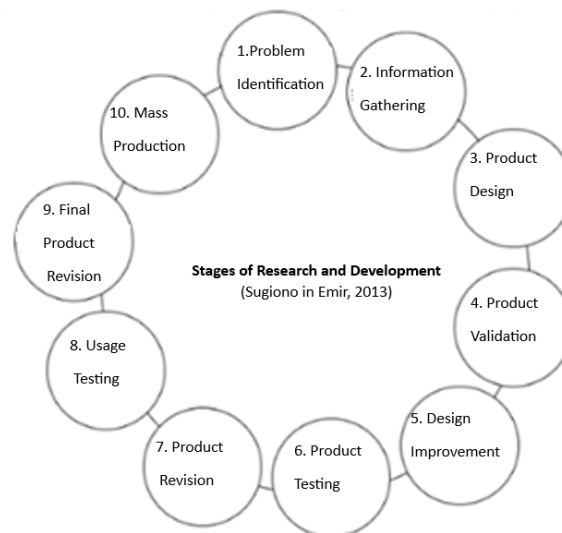
2.4. Tourism Travel Patterns

Various studies have explored the use of digital information systems in the tourism industry. Wu et al. (2013) and Guo and Wu (2014) both focus on the design and

implementation of tourism information systems, with Wu using Google Maps API and Hu using Baidu Map API. These systems aim to provide accurate and convenient information for tourists, enhancing their travel experience. Jeong et al. (2006) further expand on this by proposing a tourism information system for location-based services, integrating GIS, telematics, and intelligent transportation systems. Luo et al. (2022) provide a comprehensive overview of the current state of digital tourism research, highlighting the importance of technology, consumption, and advancements in the tourism industry. Research by Zhang et al. (2019) shows that web-based information systems and mobile applications can improve accessibility to tourism information, making it easier for tourists to plan their journeys. Additionally, Chen et al. (2020) emphasize the importance of interactivity in digital information systems to enhance the tourist experience and provide relevant real-time information.

3. METHODS

The research was conducted using a descriptive qualitative method on the research object of the Pangandaran tourism area. The stages of research used in the design according to Sugiono are as follows:



Figures 1. Stages of Research and Development

Source: Sugiyono, 2018

The data collection techniques used in this research include several methods, namely:

- a. Observation: Conducted to understand the tourism conditions in the Pangandaran tourism area.
- b. Interviews: Conducted to gather information by asking questions to informants.
- c. Documentation Study: Extracting secondary data from books, journals, publications, and digital information related to Pangandaran.

The data collection techniques employ data triangulation using the Miles and Huberman model, which involves data reduction, data presentation, and drawing conclusions.

4. RESULTS AND DISCUSSION

4.1. Identification of Gastronomy and Wellness Tourism Product Resources in Pangandaran

The Pangandaran tourism area is one of the popular tourist destinations for the community in West Java. This area features nature reserves, coastlines, oceans, and geological formations

that are utilized by the local population as a source of livelihood. The tourism sector has become one of the supporting sectors for economic activities in this area, alongside the marine and fisheries sector.

Based on these characteristics, travel patterns can be designed in accordance with the potential tourism resources available, including marine tourism, gastronomic tourism, and wellness tourism. To obtain recommendations for tourism travel patterns, an assessment of the tourism product components can be conducted as shown in Table 1 below.

Table 1. Justification of Gastronomy and Wellness Tourism Activities in Pangandaran

Activity Resources	Condition		Justification
	Actual	Potential	
Health Nutrition or Diet			
Soto Entog		√	Not Recommended
Nasi Jolem	√		Recommended
Jus Kecombrang	√		Recommended
Angeun Sawah	√		Recommended
Pindang Gunung	√		Recommended
<i>Seafood</i>	√		Recommended
Mind Mental Activity or Education			
Desa Wisata		√	Recommended
Conservation of Turtles	√		Recommended
Nature Tourism Park and Pangandaran Nature Preserve	√		Recommended
Eco-print Batik Dohan Workshop		√	Recommended
Water Activity	√		Recommended
Beach Walk	√		Recommended
Snorkeling	√		Recommended
Body Rafting	√		Recommended
Body Physical Fitness or Beauty Care			
Sunbathing	√		Recommended
Beach Volleyball		√	Not Recommended
Spa	√		Recommended
Traditional Massage	√		Recommended
Relaxation or Meditation			
Meditation at Batu Hiu Beach	√		Recommended
Meditation at Karapyak Beach	√		Recommended
Meditation at Pangandaran Nature Tourism Park	√		Recommended
Meditation at Green Canyon	√		Recommended

Source: Researcher, 2024

In determining tourism accessibility, justifications are used to understand all means and infrastructure of tourism accessibility in the Pangandaran area, with the result that accessibility to the Pangandaran area is sufficiently adequate. Land transportation services are

an important mode of transport in facilitating the movement of tourists visiting the Pangandaran area.

Based on the justification, the recommended travel itinerary is for 2 days and 1 night, with the following route:

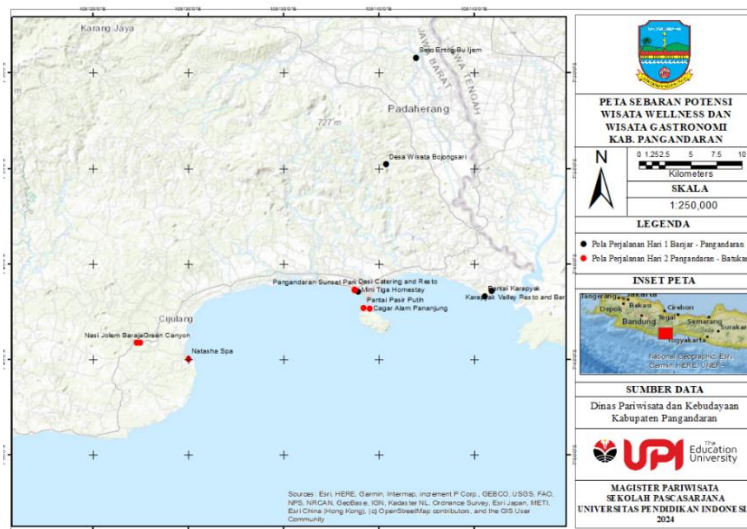
Day 1:

Traveling from Banjar, the first tourist destination is Soto Entog for breakfast. The journey continues to Bojongsari Tourism Village for trekking activities, followed by meditation and yoga around the rice fields, and lunch featuring traditional Sundanese nasi liwet. After that, the journey proceeds to Karapyak Beach for beach walking activities and meditation in the afternoon at Karapyak Beach. Dinner will be at Karapyak Valley Resto, followed by check-in at the accommodation.

Day 2:

In the morning, tourists will have breakfast at the accommodation and head to the east beach for a boat ride around Pananjung Island, followed by a crossing to the snorkeling location for snorkeling activities. Next, tourists will explore TWA Pangandaran and meditate in that area. Tourists will return to the east beach by boat and have a seafood lunch. After lunch, tourists will be taken to Green Canyon for activities such as river boating, body rafting, swimming, and meditation in the area. After that, tourists will enjoy Nasi Jolem for dinner in the Green Canyon area and have a traditional massage nearby. Finally, tourists will return to their accommodation.

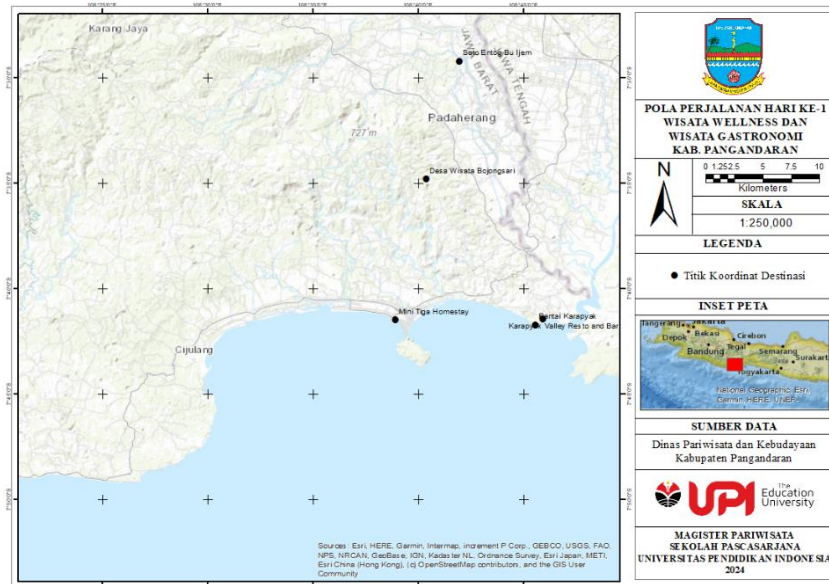
4.2. Design of a Digital Information System for Mapping Gastronomy and Wellness Tourism in Pangandaran



Figures 2. 2D1N Gastronomy and Wellness Travel Itinerary in Pangandaran

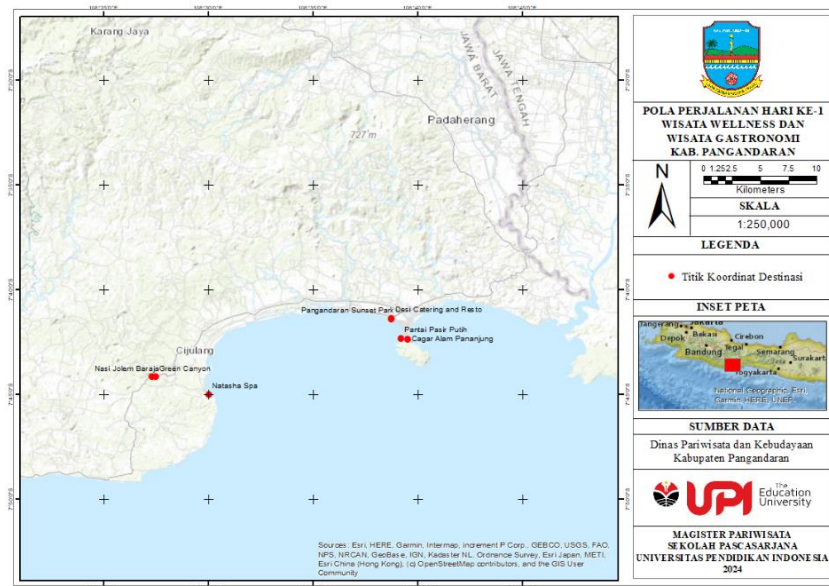
Source: Researcher, 2024

Figure 2 shows the map of the gastronomy and wellness travel itinerary in Pangandaran Regency as a follow-up to the formulation of recommendations for a 2-day, 1-night gastronomy and wellness travel itineraries in Pangandaran.



Figures 3. Day 1 Itinerary for Gastronomy and Wellness Tourism in Pangandaran
Source: Researcher, 2024

Figure 3 shows the points of destinations that can be visited on day 1 during the gastronomy and wellness tourism activities in Pangandaran Regency.



Figures 4. Day 2 Itinerary for Gastronomy and Wellness Tourism in Pangandaran
Source: Researcher, 2024

Figure 4 shows the destinations that can be visited on day 2 during the gastronomy and wellness tourism activities in Pangandaran Regency.

5. CONCLUSION

The Pangandaran tourism area has several tourism potentials that can fulfill the concepts of marine tourism, gastronomy, and wellness. This condition is supported by the progress of the tourism sector, which can also support the advancement of other sectors. However, there is still a lack of information systems regarding the hidden potentials in this area, including gastronomy and wellness tourism destinations in Pangandaran, making it unable to brand this area effectively with gastronomy or wellness tourism branding.

To provide a solution, this research results in the design of a digital information system for gastronomy and wellness tourism travel patterns in Pangandaran. This design product

contains tourism maps and information about tourism resources that can be accessed by the public. As a follow-up to this research, the digital information system can be developed interactively by incorporating virtual reality and augmented reality to attract tourist visits, allowing the gastronomic and wellness potential of the Pangandaran area to be recognized by a wider audience.

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