



Community perception of river tourism development on the Petagas river, Malaysia – Lessons for Can Tho City

Dao Duy Huan^{1*}, Le Nhut Pil²

¹Nam Can Tho University

²Banking University

*Corresponding author: Dao Duy Huan (email: ddhuan50@gmail.com)

DOI: 10.64632/jsde.37.2025.603

ABSTRACT

Received: 3/6/2025

Revised: 10/7/2025

Accepted: 5/8/2025

Keywords: local community attitudes, river tourism, water

Unpolluted rivers with protected riverbanks provide significant opportunities for tourism development. In recent decades, there has been growing interest in rivers as tourism resources. Globally, the demand for river cruises and water sports has increased rapidly, along with the development of riverbanks for tourism purposes such as accommodation, dining, and shopping. However, the attitudes and perceptions of the local community play a crucial role in developing a successful river tourism resource. The aim of this study is to investigate your perceptions as a local resident regarding the development of river tourism on the Petagas River in Kota Kinabalu, Sabah, Malaysia. Semi-structured interviews were conducted with 79 riverside residents to understand your views on the development of river tourism, assess your potential participation in such activities, and identify issues you believe could hinder tourism development. The findings show that while you generally support tourism development, you also recognize the need to restore the river ecosystem and to change several current uses of the river.

1. INTRODUCTION

River tourism has become increasingly popular in recent decades, particularly in Europe, but also in Asia and some parts of the United States. Long, navigable rivers such as the Rhine, Danube, Mississippi, and Mekong offer excellent opportunities for extended overnight cruises.

Shorter river systems have also become popular with operators offering day and overnight excursions. While generally supported by local residents, some communities through which river cruises pass have raised complaints including a lack of profitability for investment in cruise infrastructure, poor support for local

employment, waterway pollution, and overtourism (Prideaux, 2018). Many of these complaints are similar to criticisms of ocean cruising, particularly in the Caribbean (Pinnock, 2014). Based on these experiences, destinations interested in promoting tourism using their waterways need to consider the range of negative and positive impacts that tourism can generate. In areas not previously used as tourism resources, it is especially important to consider the impact that river tourism can have on community values, employment, waterways, adjacent riverbanks, the surrounding built environment, and the ecosystem.

The objective of this study is to explore the attitudes of these communities by assessing their perceptions of tourism development and their potential participation if a decision is made to further support tourism development. Understanding the local community's perspective on tourism development provides policymakers and investors with information on how local communities can benefit from tourism, the scale of tourism development that the community will accept, and the costs that may be incurred in gaining community cooperation. This study makes several contributions to the river tourism literature. Firstly, these findings support the important role that the potential for mutually beneficial exchange between communities and tourists (social exchange theory) can play in gaining local community support for tourism projects. Secondly, the study also supports the centrality of stakeholder theory as a key tool to ensure community participation in tourism development.

1.1 River tourism

Rivers have played a central role in human history since the dawn of civilization and before (Prideaux, Timothy, and Cooper, 2009) by contributing to the accumulation of wealth based on agriculture and trade, helping many great civilizations to develop. Rivers also support many human-related activities such as transportation, providing water for urban settlements, sources of protein, irrigation, serving as boundaries between nations, and more recently, tourism. Unfortunately, rivers are sometimes also seen as convenient places to dispose of human and industrial waste, which can severely reduce a river's utility for tourism purposes. A review of tourism literature reveals that aside from a book edited by Prideaux and Copper on river tourism (2009) and a relatively small number of articles (e.g., Fachrudin & Lubis, 2016; Bittar-Rodrigues and Prideaux, 2018) focusing specifically on tourism activities on waterways, research on the tourism use of waterways and rivers is limited. This gap in the literature is surprising as rivers are one of humanity's most important natural resources.

From a tourism perspective, the physical aspects of a river, including environmental quality, the ecosystem of the areas surrounding the river, and the cultural and historical aspects of the human landscape through which the river flows, have the potential to be major attractions. However, the continuous maintenance of water quality along with the protection of rivers and other natural resources is essential and requires planning strategies and management activities that enhance the long-term sustainability of the resource.

From the perspective of local communities where rivers flow, strategies to maximize the

economic and social benefits that tourism can bring must be shared by many local stakeholders including local communities bordering the river, other river users including graziers and farmers, and various government agencies controlling the use of the river and adjacent riverbanks.

Local communities must be aware of the changes needed to restore degraded rivers and the changes that may occur through tourism development. Local communities must also understand that the benefits that can be gained from the tourism use of rivers, riverbanks, and adjacent ecosystems will require development to be undertaken in a way that achieves the highest possible level of sustainability. To achieve these goals, it is necessary to educate community awareness, provide appropriate training programs, and be willing to only support activities that support long-term sustainability. However, this is not always the case and there is a risk that the views of local communities may be overlooked (Haywood, 1988; Chiu et al., 2016).

1.2 Community perceptions and attitudes

When reviewing the literature, we find that many studies have been conducted on the attitudes and perceptions of local residents regarding issues related to tourism development (Govender et al., 2021). Key factors influencing local residents' perceptions and attitudes towards tourism development include economic factors (Linderová et al., 2021), socio-cultural factors (Meimand et al., 2017) and environmental impacts. In a study examining the preferences and perceptions of Hong Kong residents towards nature-based tourism, Chiu et al. (2016) found that older, more educated, and higher-income Hong Kong residents were particularly interested in the psychological functions of natural area

resources. Study respondents also expressed concerns about the sustainability of tourism in natural areas, which Chiu et al. (2016) found was not highly prioritized in most development strategies. At this point, it is worth noting that the study by Chiu et al. (2016) focused on local residents' perceptions of nature tourism development, but did not focus on their intention to participate.

In an investigation of the level of participation in ecotourism management in a Taiwanese wetland community, Zhang and Lei (2012) argued that environmental knowledge influences ecotourism attitudes, which in turn directly and indirectly determines ecotourism participation intentions through individual landscape compatibility. Local community participation includes participation in training, providing input for tourism planning and management, and participating in management decision-making (Zhang & Lei, 2012). In developing countries, elite dominance, lack of awareness, unrepresentative legal processes, and inadequate governance can limit local community participation (Tosun, 2000). Other scholars point out that a lack of stakeholder interaction, ineffective community organizations, limited community expertise, limited access to financial support, and a lack of support are factors contributing to low levels of local community participation in tourism planning (Kebede, Bekele & Woldeamanuel, 2014; Kibicho, 2008). Ironically, sustainable tourism development is almost impossible without local community support and participation (Fallon & Kriwoken, 2003; Gursoy & Rutherford, 2004; Nicholas, Thapa & Ko, 2009). For this reason, understanding the local community's intention to

participate is of utmost importance (Lee, 2013) in assessing opportunities to use local resources, including rivers, to support tourism activities.

In an investigation of community support for sustainable wetland tourism development in Taiwan, Lee (2013) identified the importance of community connectedness and community involvement through participation. Importantly, engagement and participation are influenced by the perceived benefits that the community expects from tourism development. This view is consistent with Gursoy, Jurovski & Uysal (2002) and Nunkoo and Ramkissoon (2011). The findings of these studies are also consistent with Social Exchange Theory, which is widely used to explain interactions between tourists and local communities described as "exchanges" for mutual benefit (Ap, 1992; Andriotis & Vaughan, 2003 in Chiu et al., 2016). People evaluate the costs and benefits of this "exchange". Those who believe they will benefit from the interactions will support and participate in tourism development (Kaltenborn, Andersen, Nellemann, Bjerke, & Thrane, 2008; Lee, 2013). Those who do not believe they will benefit will tend to have lower support for tourism development.

The importance of engaging stakeholders who may be affected by tourism development also needs to be considered. Stakeholder theory provides a useful perspective on community participation in tourism development. As Wondirada & Ewnetub (2019) note, the main thesis of stakeholder theory is that for tourism to be used to achieve sustainable development, there needs to be a fair balance of power among all stakeholders so that social equity, economic balance, and ecological integrity can be achieved at a target destination. From this perspective,

residents not only have the opportunity to express their opinions but must also participate in the tourism development planning and decision-making process (Baral & Heinen, 2007; Wondirada & Ewnetub, 2019).

The foundation for the research discussed in this paper is the argument that while local community perspectives are crucial to understanding the conditions necessary for successful river tourism development, the reality is that local voices are often not heard in development planning processes (Honey, 2008). The importance of local voices needs to be recognized, and as Gursoy and Rutherford (2004) argue, it is important to understand local perspectives because perceptions of the cultural, social, and economic impacts of tourism will influence individual decisions to support initial tourism development and, in some cases, to participate in the tourism development process.

2. RESEARCH METHODS

The objective of this study is to understand local community perspectives on developing the Petagas River as an ecotourism resource and to determine their intention to participate if tourism development proceeds. The research design was based on a two-step data collection process. Step one involved conducting semi-structured surveys with residents in three target Kampongs (villages). Step two involved collecting water quality samples at four locations along the river to assess the environmental status of the river. Participants were randomly invited to participate in the study. Interviews lasted from one to two hours and were electronically recorded with the participants' permission. The study was approved by the Putatan District Office and the research committee of Universiti Malaysia Sabah.

Informed consent was obtained prior to conducting the study, including permission to publish all photos and images. The questions used in the survey were based on previously used questions in community attitude research (Stylidis, 2018).

Data analysis was performed in two stages, the first stage being transcription formatting. All transcripts were translated from Malay to English by a certified translator. Leximancer software was used to identify concepts and standard programmed synonyms. Results were displayed in several formats including web configurations, Leximancer concept maps, and quadrant reports.

The majority of respondents commuted to work in nearby urban areas and only used the river for recreational fishing, although most participants lived on or near the river. Piers located in the villages were primarily used for fish trading. Residents of two villages, Kg. Petagas and Kg. Muhibah, expressed interest in participating in tourism primarily as a method of improving village infrastructure and enhancing the environmental quality of the river.

3. RESULTS AND DISCUSSION

3.1 Survey sample characteristics

Table 1. Respondent profile table

Characteristic	Items	Frequency	Percentage %
Gender	Male	39	49.4
	Female	40	50.6
Respondent age	16–25 years old	16	20.4
	26–35 years old	16	19.0
	36–45 years old	12	15.4
	46–55 years old	13	16.6
	> 56 years old	23	29.4
Location	Tengah Padang	27	34.2
	Kampung Petagas	27	34.2
	Kampung Muhibbah	25	31.6
Ethnicity	Bajau	46	58.2
	Malay	4	5.1
	Pakistani	2	2.5
Marital status	Single	20	25.3
	Married	57	72.2

Characteristic	Frequency	Percentage %
Divorced	1	1.3
Widowed	1	1.3

3.2 Local community acceptance of river tourism development

To understand perceptions of the potential for participation in tourism development, a comparison between the three villages revealed interesting results. First, respondents were asked about their interest in participating in river tourism projects. Residents of Kampong Tengah Padang indicated no interest in river tourism. Residents of the other two villages indicated a much higher level of interest in tourism development in their villages.

Respondents were asked about their reasons for not being interested in participating in river tourism.

Kampong Tengah Padang residents cited "no opportunity" as the main reason for their lack of interest in river tourism. Other reasons included: "very busy" with daily life; "doing housework"; "taking care of family members"; "running own business"; "working in businesses or agencies" and "age factor". Local voices from Kampong Petagas indicated six factors, namely: "caring for family" including young children, grandchildren, and grandparents; "having own business," "doing housework"; "traveling for domestic and international work" - including frequent business trips; "very busy" and "working at companies or agencies". These results are consistent with Lee's (2013) research that local communities need to feel connected to a tourism project to participate. The results are also consistent with Kebede et al. (2014) and Kibicho (2008) in finding that loose

community organization, poor interaction among stakeholders, lack of expertise within the community, limited access to financial support, and lack of support are some factors contributing to low participation rates. Local communities along the Petagas River cited personal reasons such as age, family, work, and daily duties as reasons for their interest in participating in tourism activities.

The results showed that all three villages had similar motivating factors in terms of interest in river tourism development, specifically that river tourism creates "business opportunities".

3.3 Issues and challenges in river tourism development on the river

Understanding the local community's perspective on the tourism potential of the Petagas River is important. Figure 6 shows the themes that emerged from the content analysis. Nine themes were identified: - 'river', 'suitable', 'activities', 'needs', 'area', 'trash', 'cleanliness', 'road' and 'larger'. The top three themes in the dataset were, in order of strength:

The river – Respondents in all three villages agreed that the River must be restored. Key restoration issues included beautifying the area around the river, cleaning the river, improving the area for recreation, and ensuring public safety. Although the river has many environmental problems, the communities all agreed that the River is suitable for development because it is close to Kota Kinabalu International Airport (Sabar's main domestic and international tourism

gateway) and has access to the sea. Examples of statements from respondents included:

Respondent 1: The cleanliness of the river is not well maintained and the view of the river is not attractive.

Respondent 2: The cleanliness of the river is unsatisfactory because a lot of trash is discharged. The scenery is beautiful because it is close to the sea and the coast.

Respondent 3: The location of the river is very strategic, close to the airport. The river is beautiful because it is connected to the sea.

Respondent 4: The scenery is not beautiful.

Respondent 5: The river is very deep and very dangerous.

Respondent 6: Maybe not safe, there are crocodiles there.

Suitable – The majority of respondents (64.56%) agreed that the Petagas River has the potential and is suitable for development as a river tourism destination. The following are selected local voices on the theme "suitable":

Respondent 1: Yes, this place can be transformed into a tourism center by conducting boat fishing activities to explore the environment in the Petagas Area.

Respondent 2: Beautification and sanitation. The village is a place for business such as opening stalls along the riverside.

Respondent 3: Yes, this river can serve as a waterfront like in Sarawak. The river also connects directly to the sea, so stalls can be set up along the river and lights can be provided along the riverside.

Respondent 4: Yes, it could be a popular fishing spot.

Respondent 5: Has development potential because it is close to the city and airport.

Respondent 6: Yes, it can be an attraction for fishing, boating, and water sports activities.

The River - Respondents in all three villages agreed that the Petagas River must be restored. Key restoration issues included beautifying the area around the river, cleaning the river, improving the area for recreation, and ensuring public safety. Although the river has many environmental problems, the communities all agreed that the Petagas River is suitable for development because of its proximity to Kota Kinabalu International Airport (Sabar's main domestic and international tourism gateway) and its access to the sea. Examples of statements from respondents included:

Respondent 1: The cleanliness of the river is not well-maintained and the view of the river is not attractive.

Respondent 2: The cleanliness of the river is unsatisfactory because a lot of garbage is dumped there. The scenery is beautiful because it is near the sea and the coastline.

Respondent 3: The river's location is very strategic, close to the airport. The river is beautiful because it is connected to the sea.

Respondent 4: The scenery is not beautiful.

Respondent 5: The river is very deep and very dangerous.

Respondent 6: It's probably not safe, there are crocodiles there.

Suitable - The majority of respondents (64.56%) agreed that the Petagas River has the potential and is suitable for development as a river tourism destination. The following are selected local voices on the "suitable" theme:

Respondent 1: Yes, this place can be converted into a tourism center by conducting

boat fishing activities to explore the environment in the Petagas Area.

Respondent 6: Yes, it could be an attraction for fishing, boating, and water sports activities.

Activities - The 'activities' theme refers to examples of activities that could be developed into tourist attractions on the Petagas River. A large number of respondents (40.51%) stated that cleaning and beautifying the river is an important first step to developing the river into a tourist attraction. The communities believe that a clean and beautiful river is a mandatory factor to encourage tourists to visit the river. The following are selected responses on the "activities" theme:

Respondent 1: Let's maintain the cleanliness of the river.

Respondent 2: Restore and clean the river.

Respondent 3: First, the river needs to be cleaned. Build a walkway along the riverbank and provide seating.

Respondent 4: Erect a booth on the riverbank for villagers to do business. General sanitation of the riverbank and maintaining cleanliness.

Respondent 5: Recreation activities. Boating activities. Fishing activities. Building a bridge.

Respondent 6: Can participate in sports activities around the river area. There are boating activities on this river."

3.4 Dissolved oxygen levels of the Can Tho river

As part of the study, a simple water quality test was conducted using only the dissolved oxygen (DO) variable. DO is used to measure the amount of oxygen available for flora and fauna and is reported as a percentage of saturation or milligrams per liter (mg/L). Oxygen concentration can decrease if decomposing

organic materials such as human and animal waste and dead plants are present. DO levels below 6 mg/L can be harmful to a river's ecosystem (Rajwa- Kuligiewicz et al., 2014). Four locations were chosen for DO testing (see Figure 8, the identified locations are identified by star shapes). Based on the simple sample, the DO concentration of the Petagas River is shown in Table 4 as follows:

Table 2. Water depth and dissolved oxygen at each station

Station (downstream to upstream)	Water depth (m)	Dissolved oxygen (mg/L)
1	2.7	3.36
2	2.4	4.68
3	2.4	5.36
4	2.2	5.65

The dissolved oxygen (DO) concentration ranged from 3.36 mg/L to 5.65 mg/L, showing a decreasing trend from the first station to the fourth station. The first station is located at the mouth of the river (estuary). The indicators show a high level of domestic waste in the river. The test site also recorded high levels of solid waste in the river, including plastic bags and bottles, old tires, paint cans, and other types of garbage. Human wastewater is also discharged directly into the river. This type of waste can be dangerous to aquatic animals, which often die from ingesting solid waste directly. The test also found that the river has a low dissolved oxygen level, which can lead to poor aeration, causing stress to aquatic organisms such as fish and plants. Low dissolved oxygen levels also inhibit

the growth of fish and hinder natural reproduction. Waste sludge containing domestic waste, fish farms, and agriculture can also lead to excessive nutrient levels causing eutrophication, which contributes to a decrease in dissolved oxygen levels (Fathi et al., 2018). The ongoing pollution of the river will lead to changes in the physiological and biochemical characteristics of plants (Inyinbor et al., 2018). In the long term, riverbank flora may become toxic or die from mineral toxicity. In comparison, the upstream sections of the river have fewer human settlements and therefore less solid waste. Dissolved oxygen is also higher at these stations compared to the first station, as evidenced by more riverbank vegetation on the riverbanks and cleaner water.

3.5 Lessons learned for the development of tourism services on the river in Can Tho City

First, this study examined the perceptions and intentions of local communities to participate in river tourism development. The findings indicate that while local communities recognize that the river has high tourism development potential, the current state of the river makes it impossible for tourism development to occur without river restoration.

Second, the study found that the community is interested in and understands the importance of a clean and beautiful river. They also believe that there is an urgent need to restore the environmental quality of the river to attract tourism development.

Third, despite understanding the benefits of participating in tourism, issues such as age, family, work, and daily tasks lead to a lack of interest in supporting tourism development along the river.

Fourth, the results show that the environmental quality of the river is the main concern of the local community in developing the river into a tourism resource. This observation is not surprising as concerns about water pollution are one of the major environmental issues of the 21st century and can be a significant barrier to tourism development. Given the current state of the river, it is clear that the local community will need government support to address the problems facing the river. Only then will it be suitable for development as a tourism resource.

Fifth, the condition of the river is similar to the problems faced by many countries where water resource management lacks an integrated and comprehensive approach, often with little participation from the public and other government stakeholders. One of the major challenges facing riverside communities in many developing countries is a lack of knowledge and understanding of the appropriate waste management strategies needed to manage rivers. While respondents were aware of the concept of recycling and other sustainable waste management strategies, this understanding had not translated into participation in environmentally friendly activities, including waste management.

Sixth, when communities show a low level of interest in environmental issues, they may not understand the consequences of their actions. This knowledge gap can make them feel excluded from the waste management decision-making process. A solution to this dilemma is to ensure that educational programs are implemented to inform communities about environmental issues and to ensure community participation in all aspects of environmental planning.

Seventh, these findings highlight the importance of engagement and participation in tourism development, as Lee (2013) has argued. Wondirada and Ewnetub (2019) emphasize the importance of local community involvement in tourism through daily experiences with tourism activities. They argue that awareness campaigns by other stakeholders such as the government and NGOs will only be effective if local communities feel engaged and participate in tourism activities. This view is consistent with van Niekerk's (2014) argument that the success of community participation depends on the level of community engagement and whether there is a perception that the community has a legitimate and democratic right to participate and be involved in decisions that affect their livelihoods. The findings of this study also support previous studies (Lai et al., 2017) on the need for local governments and other relevant development agencies to encourage community participation from the early stages of the river tourism development process.

Eighth, these findings are also consistent with the need for communities to derive positive benefits from tourism, as argued by social exchange theory (Ap 1992). However, in this case, this can only become a reality when the river is restored and the community has the potential to actively participate in any tourism projects that may be established in the study area. Several strategies can be applied to enhance community participation. The first is to empower local communities so that they have a voice in tourism development from the beginning (Wondirada & Ewnetub, 2019; Snyman, 2014). Empowerment in the first instance must begin with environmental education.

Ninth, the formation of a trusting relationship between the local community and other stakeholders, especially local governments and relevant agencies, is critical for building trust and will require regular and respectful interactive activities with the local community. Town hall-style meetings and even participation in local festivals can be useful in building relationships. Another important factor in building trust is enhancing skills and knowledge—which can be either tourism-related capital or social capital that allows local communities to improve their knowledge and skills through participation in tourism activities (Wondirada & Ewnetub, 2019).

4. CONCLUSION

Based on the results of this study, it is clear that addressing the many waste problems identified by respondents will require educating the community on sustainable waste management. It is also clear that the public sector should develop programs to educate the community on waste management and ensure the enforcement of relevant laws. Effective education includes the use of mass media (radio, television, newspapers, posters, magazines), field participation activities including through the school environment, and the use of extension workers who can provide direct advice.

REFERENCES

- Andriotis, K. (2005). Community groups' perceptions of and preferences for tourism development: evidence from Crete. *Journal of Hospitality & Tourism Research*, 29(1), 67-90.
- Ap, J. (1992). Residents' perceptions on tourism impacts. *Annals of Tourism Research*, 19, 665-690.

- Baral, N. and Heinen, J.T. (2007). Resources use, conservation attitudes, management intervention and park-people relations in the Western Terai Landscape of Nepal. *Environmental Conservation* 34(1): 64-72.
- Bittar Rodrigues, C., and Prideaux, B. (2018). A management model to assist local communities developing Community Based Tourism ventures: A case study from the Brazilian Amazon. *Journal of Ecotourism*, 17:1, 1-19, DOI: 10.1080/14724049.2017.1309045
- Chiu, H. Y., Chan, C. S., & Marafa, L. M. (2016). Local perception and preferences in nature tourism in Hong Kong. *Tourism Management Perspectives*, 20, 87-97.
- Edoy, D., & Chan, J. (2021), Application of GIS in identifying potential site for river tourism activities along the Petagas River. *Ilkogretim Online*, 20(4), 743-752, DOI: 10.17051/ilkonline.2021.04.78
- Fachrudin, H. T., & Lubis, M. D. (2016). Planning for riverside area as water tourism destination to improve quality of life local residents, case study: Batuan–Sikaming River, Medan, Indonesia. *Procedia-Social and Behavioral Sciences*, 234(31), 434-441.
- Fallon, L. D., & Kriwoken, L. K. (2003). Community involvement in tourism infrastructure: the case of rahan Visitor Centre, Tasmania. *Tourism Management*, 24, 289-308.
- Fathi, E., Zamani-Ahmadm Mahmoodi, R. & Zare-Bidaki, R. (2018). Water quality evaluation using water quality index and multivariate methods, Beheshtabad River, Iran. *Appl Water Sci*, 8, 210.
- Govender, K., Maziriri, E. T., and Chuchu, T. (2021). Perceptions of Local Tourists, Attitudes and Willingness to Visit Local Destinations: A Destination Image Case. *Business Management Analysis Journal*, 4(2): 121-144.
- Gursoy, D., & Rutherford, D. G. (2004). Host attitudes toward tourism e an improved structural model. *Annals of Tourism Research*, 31(3), 495-516.
- Gursoy, D., Jurowski, C., & Uysal, M. (2002). Resident Attitudes: A Structural Modeling Approach. *Annals of Tourism Research*, 29, 79-105.
- Harwood, I. A., Gapp, R. P., & Stewart, H. J. (2015). Cross-check for completeness: Exploring a novel use of leximancer in a grounded theory study. *Qual. Rep.*, 20, 1029–1045.
- Haynes, E., Garside, R., Green, J., Kelly, M. P., Thomas, J. & Guell, C. (2019). Semiautomated text analytics for qualitative data synthesis. *Research Synthesis Methods*, 10, 452-464.
- Haywood, K. M. (1988). Responsible and responsive tourism planning in the community. *Tourism Management*, 9(2), 105–108.
- Honey, M. (2008). *Ecotourism and Sustainable Development: Who Owns Paradise?* Chicago: Island Press.
- Inyinbor Adejumo, A., Adebese Babatunde, O., Oluyori Abimbola, P., Adelani Akande Tabitha, A., Dada Adewumi, O., & Oreofe Toyin, A. (2018). Water pollution: effects, prevention, and climatic impact. *Water Challenges of an Urbanizing World*, 33, 33-47.

- Kaltenborn, B. R. P., Andersen, O., Nellemann, C., Bjerke, T., & Thrane, C. (2008). Resident attitudes towards mountain second-home tourism development in Norway: The effects of environmental attitudes. *Journal of Sustainable Tourism, 16*(6), 664-680.
- Kebede, A. G., Bekele, M., & Woldeamanuel, T. (2014). Natural resource use conflict in Bale Mountains National Park, Southeast Ethiopia. *International Journal of Biodiversity and Conservation, 6*(12), 814-822.
- Kibicho, W. (2008). Community-based tourism: A factor-cluster segmentation approach. *Journal of Sustainable Tourism, 16*(2), 211-231.
- Lee, T. H. (2013). Influence analysis of community resident support for sustainable tourism development. *Tourism management, 34*, 37-46.
- Linderová, I., Scholz, P., & Almeida, N. (2021). Attitudes of local population towards the impacts of tourism development: Evidence from Czechia. *Frontiers in Psychology, 12*, 684773.
- Meimand, S. E., Khalifah, Z., Zavadskas, E. K., Mardani, A., Najafipour, A. A., & Ahmad, U. N. U. (2017). Residents' attitude toward tourism development: A sociocultural perspective. *Sustainability, 9*(7), 1170. <https://doi.org/10.3390/su9071170>
- Nicholas, L. N., Thapa, B., & Ko, Y. J. (2009). Residents' perspectives of a world heritage site: The pitons management area, st. Lucia. *Annals of tourism research, 36*(3), 390-412.
- Nunkoo, R., & Ramkissoon, H. (2011). Developing a community support model for tourism. *Annals of tourism research, 38*(3), 964-988.
- Pinnock, F. (2014). The future of tourism in an emerging economy: the reality of the cruise industry in Caribbean. *Founded in Worldwide Hospitality & Tourism Themes, 6*(2), 127-137.
- Prideaux, B., Timothy, D. J., & Cooper, M. (2009). Introducing river tourism: physical, ecological and human aspects. *River tourism, 1*.
- Rajwa-Kuligiewicz, A., Bialik, R. J., & Rowiński, P. M. (2014). Dissolved oxygen and water temperature dynamics in lowland rivers over various timescales. *Journal of Hydrology*.
- Stylidis, D. (2018). Place attachment, perception of place and residents' support for tourism development. *Tourism Planning & Development, 15*(2), 188-210.
- Tosun, C. (2000). Limits to community participation in the tourism development process in developing countries. *Tourism Management, 21*(6), 613-633. doi: 10.1016/S0261-5177(00)00009-1
- Wondirad, A., & Ewnetub, T. (2019). Community participation in sustainable tourism development in rural Ethiopia: The case of Wenchi Crater Lake. *Journal of Ecotourism, 18*(3), 253-272.
- Zhang, J., & Lei, S. L. (2012). Residents' environmental knowledge and ecotourism participation: An investigation of a wetland community in Taiwan. *Journal of Sustainable Tourism, 20*(4), 601-618.