

The Development of River Ecotourism in the Production of Urban Economic Space

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Abstract

This study aims at explaining river ecotourism in the production of urban economic space in solving the economic problems of riverbank communities. This study uses a mixed method approach with a dominant qualitative, less prevalent quantitative scheme, mixed qualitative and quantitative methodology. Data was collected through in-depth interviews with 17 informants and survey/census on 40 respondents who are active in river ecotourism operations. The results show the formation of river ecotourism has changed the community's economy from a weak economy to a better one. The relationship between "duration of work in ecotourism operations" (variable X) and "level of income earned" (variable Y) has a correlation coefficient of $0.505 > 0.320$ at a significance level of $0.001 < 0.005$ indicating that the relationship between the two is "moderate". The sustainability of ecotourism must be carried out and become the concern of all parties including central, regional and village governments, as well as those involved in the formation of tourism space because river ecotourism opens indirectly the way for improving the economy of riverbank communities. This research is quite unique because it can turn ecosystem problems into an advantage.

Keywords: river ecotourism development; urban economic space production; mixed methods, riverbank communities

Introduction

Tourism has contributed significantly to overcoming world poverty, as evidenced by a shrinkage of 4.3% which is more than 2.5 times the world financial crisis having occurred in 2009 and can be a solution to global economic inequality (United Nations, 2021). Data of "The International Ecotourism Society" in 2019 reveals that tourism has contributed 9% to the world's GDP, 29% of which comes from the service sector, and provides 1 out of 12 existing types of jobs. Ecotourism is the answer to alternative environmentally friendly businesses that must be adapted to the carrying capacity of the environment so that degradation does not occur (Khan, 2003; Koki, 2017). For this reason, out of the many ecotourism developed by the world, one of them is river ecotourism having begun to be developed by many countries in the world for the sustainable ecotourism purpose. Some examples of river ecotourism having been developed in the world are the Chao Phraya River in Thailand, the Karaj River in Iran, and others (Goharipour & Hajiluie, 2016; Laksono et al., 2016; TIES, 2019). Indonesia also has a lot of potential for developing river ecotourism because it has many large potential rivers such



as the Mahakam River, Musi River, Kapuas River (Mulya & Yudana, 2018; Susanto & Kiswanto, 2020).

In addition to economic benefits, the development of river ecotourism also has other social and cultural benefits, such as beneficial interests, political interests, suggestions in making public policies, public awareness about natural and cultural sustainability, history and philosophy of the region, and benefits others (Demartoto, 2013; Mudasir et al., 2020; Azizah, et al., 2021). Yogyakarta City is the one dominated by education and tourism sectors having an impact on human, social and economic resources. The development of river ecotourism is strengthened by physical condition that Yogyakarta City has limitations in developing its tourism potential due to limited and increasingly narrowing urban land due to the conversion of functions into community settlements, including river banks. The large number of settlements on the river banks lead the river to change its function and result in a lot of environmental damages, like the river becoming a dumping ground for garbage and household waste, medical waste, livestock waste, etc., then leading to slums (Yunus, 2005).

It is known, the slum settlements in the area of Yogyakarta City reach 264.90 hectares width. The Yogyakarta City area with the largest slum area is the Yogyakarta District, 75.20 hectares or 28.39 percent of the total slum area in Yogyakarta City. Several factors cause urban slum settlements: dense settlements, low income and community awareness, and limited access to facilities and infrastructure (Sulestianson & Indrajati, 2015; Ritohardoyo & Sadali, 2017). Gajah Wong River is in segment 1 and has around 38.13-hectare slum area of . However, in 2017 the slum areas in segment 1 decreased to 9.46 hectares because slum areas began to be reorganized including the construction of facilities and infrastructure and public open spaces (BPS Yogyakarta, 2022). The limited access of riverbank communities to public facilities has an impact on the difficulty of seeking decent jobs so that people also have difficulty in meeting their daily needs.

This is a strong argument for the development of ecotourism in riverbank areas, namely to alleviate the problem of slum settlements and the economic difficulties experienced by urban riverbank communities. River is an alternative very possible to develop as ecotourism due to the limited land available in the Yogyakarta City. The creation of river ecotourism as a new economic space in urban areas is carried out through the procedure of creating this space encompassing *production* including the process of creating space, *product* constituting the result of the process, and *labour* constituting the actors or perpetrators (Lefebvre, 1991; Schmid, 2008). Therefore, to solve problems related to slum settlements having an impact on the economic downturn of riverbank communities, a new urban economic space production has been chosen, namely through river ecotourism on the banks of the Gajah Wong River, Yogyakarta City.

This study aims at explaining the development of the Gajah Wong River ecotourism in creating a new economic space in Yogyakarta City. *Gap research* or *novelty* between this research and previous research is the reason underlying the development of urban river ecotourism. Several river ecotourism such as Karaj River Ecotourism in Iran, Chao Phraya River ecotourism in Thailand, Barito River ecotourism in South Kalimantan (Irawanti & Darmoko, 2022), and the majority of other river ecotourism are developed based on the potential of the river, while Gajah Wong river ecotourism is developed based on the problems of riverbank slum settlements that make this research relevant. Thus, they can be used not only to exploit the river's potential but also as a reference for determining policies to create new economic space in urban areas in tackling the problem of riverbank slum settlements. In addition to the economic impact, Gajah Wong River ecotourism also has an implicit impact, namely significant changes in people's behaviour starting from type of work, habits, to awareness of environmental health. Henri Lefebvre's *Production of Space* theory has not been



used widely to analyse an ecotourism phenomenon because it is used more widely to analyse politics and knowledge in the process of spatial formation (Lefebvre, 1991). The stages in river ecotourism have produced a new economic space in urban areas that has a direct impact on the lives of surrounding communities by balancing profit, people and planet (Elkington, 1998).

Literature review

River ecotourism development

Tourism industry is considered as the largest and most diverse industry in the world because it is one of the country's revenues (Goharipour & Hajiluie, 2016). Nature is utilized for ecotourism through management and activity plans aimed at meeting human needs (Nugroho, et al., 2018). There are four components of ecotourism that cannot be separated: tourism operators, government, communities who receive tourism benefits and tourists (TIES, 2019; Suwanto, 2004). Tourism has a significant impact on the increased regional income. One of the cities in Indonesia often referred to as a “tourist city” is Yogyakarta. Every corner in Yogyakarta city has fantastic selling points and has the potential to be used as a tourist destination, one of which is the river. The tourism potential possessed by the river is developed and aimed at improving the community's quality of life so that apart from being a physical and structural effort, it is also a non-physical effort to improve the lives of the people living along the river. While Economic benefits are expected to be the main target, social benefits must not be ignored to prevent the environmental damage (Rietbergen-mccracken & Narayan, 1998; Tisnawati & Ratriningsih, 2017).

Urban economic space production

There is no completely ideal definition of space because space is used as an arena for battles that are always contested in modern capitalists due to production and reproduction existing within that space. There are two definitions of space: in absolute and relative senses. Space in an absolute sense can be seen in plain view and is tangible, while space in a relative sense is only a concept created by humans that is perceptual, such as public space, economic space, social space, and others. Space can adapt to the thematic functions of an area with accommodation in the form of activities to meet human needs (Lefebvre, 1991; Yunus, 2005). “*Common Space*” is believed that it will always adapt itself to the interests of capital in order to maintain a relationship between production and reproduction that takes place in a capitalistic manner and affect the mentality of society (Lennon & Moore, 2019). In the production of space there is a production relation between space and society spatially requiring understanding between the specific regional context and the history contained therein. In addition, the space production is also affected by “*mode of production*”, which is always changing with the times and science and is always related to the embodiment of spatial practices through perceptions of the environment involved, *networks* related to social activities, people's private lives, and leisure (Lefebvre, 1991; Schmid, 2008).

Meanwhile, the urban economy has two benefits all at once: (1) a positive role (*Positive Theory*), which can be used as input for regulators to determine urban planning policies. (2) Normative role (*Normative Theory*) or “*welfare economic*”, which can be used to evaluate and to measure the achievement of policies having been determined by the regulator in the urban economic system. Efficiency and equity become references to evaluate and achieve an urban economic system (Fujita, 1989; Raharjo, 2005; Ritzer, 2019). For this reason, river ecotourism exists as a result of the production of urban economic space aimed at improving the riverbank communities' standard of living of (Chowdhury et al., 2021).

Riverbank community



Society is defined as a group of interconnected individuals creating a unit (Setiadi & Kolip, 2013). The riverbank community is defined as the people living in the river border area. The distance between the border and the river has been stipulated in Presidential Decree No. 32 of 1990, that the width of the river border is at least 100 m outside the settlement area, 50 m in the tributary and about 10-15m in residential areas, which is sufficient to be used as a road inspection (Decree of the President of the Republic of Indonesia No. 32 of 1990, 1990). The limitations of riverbank communities make them marginal and vulnerable either socially or economically (Lubis, 2007). Limitations of the socio-economic environment, including the amount of income, employment, number of family members, physical environment, are factors that cause people to live on riverbanks (Yeates & Garner, 1980). Thus, the people along the river have their own characteristics in carrying out their daily activities (Sridaryanti & Pinem, 2022).

Methods

This research was conducted on the banks of Gajah Wong River in Yogyakarta City, constituting one of the largest rivers. It is the only river with more than one tourist attraction object (ODTW) as river ecotourism. The issues raised in this research require clear explanations and in-depth analysis so that the type of research used is a mixed method with a dominant qualitative, less prevalent quantitative scheme, mixed qualitative and quantitative methodology (Creswell & Creswell, 2018). This study explains and describes how the process of producing new economic spaces is in Yogyakarta City through developing river ecotourism. Seventeen (17) informants had been interviewed in depth and 40 respondents had filled out a questionnaire given by the researcher. Thus, primary and secondary data were obtained from the results of interviews, surveys/censuses, observations, and documentation studies (Slamet, 2006; Suyanto & Sutinah, 2011). The interview data were then analysed using Henri Lefebvre's production of space theory and John Elkington's Triple Bottom Line theory. Quantitative data analysis techniques using relationship analysis are used to determine the relationship between "duration of work in ecotourism operations" and "level of income earned". Pearson's product moment correlation were carried out by taking a sample of 40 people from a total of 40 people with a standard error of 5% (Slamet, 2006). Survey/census data analysis was carried out using IBM SPSS. The validity test was carried out by comparing the t table degrees of freedom (df) = nk , with an alpha error of 0.05, n = number of samples, k = number of items. There are two hypotheses in this study: the alternative hypothesis (H_a) = there is a correlation between the duration of work in ecotourism operations and the level of income earned, and the null hypothesis (H_0): there is no correlation between the duration of work in ecotourism operations and the level of income earned.

Results

Procedure of river ecotourism development in the production of urban economic space

The change of the river face from a slum originally into a new face, in the presence of river ecotourism, is the result of a long process. The space that has been created is inseparable from spatial practices in which there are various kinds of activities and social interactions or what Lefebvre refers to as "lived space" (Lefebvre, 1991; Schmid, 2008). The production of economic space occurring is carried out using the nature which must pay attention to various aspects, including aspects of running a business, namely positive and negative impacts (Elkington, 1998). Elements inside *Triple Bottom Line* - *profit*, *people*, and *planet* - are inseparable because they are closely related and must be carried out optimally to obtain the maximum results (Elkington, 1998; Wolff et al., 2014). In the continuity of the business *profit* is always prioritized because it is considered as additional income. *People* are considered as an



element supporting the sustainability of the company. "Man", according to Henry Fayol, plays a very important role because it carries out management and operational functions in business activities to achieve targets or goals (Aras & Crowther, 2013; Rohman, 2017). Whereas *planet* is an illustration of the cause-and-effect relationship between the environment and the companies run, in the sense of tourism that is run (Elkington, 1998; Winarno & Sawarjuwono, 2021).

River is a part of urban ecosystem playing an important role in maintaining the balance of ecosystem and thereby conservation must be carried out if damage occurs from upstream to downstream (Widodo et al., 2010; Wilson, 2015). Significant changes have occurred Gajah Wong River, historically used to be an urban slum area, especially Giwangan Village located in Umbulharjo District, Yogyakarta City. The early life of the people living in riverbank areas was inseparable from inadequate housing, uncertain income and uncertain and controversial jobs such as construction workers, odd jobs, prostitutes, jobs containing criminal elements etc. Complex problems in riverbank communities give rise to a dimension of "Spatial Practice". Lefebvre said that spatial practice is related to the process of production and reproduction between objects and products that are spatially connected (Ghulyan, 2019; Lefebvre, 1991). The material dimension of social activity and interaction is shown in this dimension. A building or a place cannot be called a "space" if there is no activity in it or what is referred to as a spatial practice (Kulusjärvi, 2020). Someone will find network and communication if they do social activities and interact with each other. This spatial practice is referred to as "lived space" or living space although the people living on the banks of the river live in adversity and limitations (Lefebvre, 1991; Schmid, 2008).

The change in the face of the Gajah Wong River began with the arrangement of urban slum areas was carried out by the Ministry of Public Works and Housing (Indonesian: *Kementerian PUPR*), through building green open spaces and city parks in the area. Apart from that, it also has irrigation canals that are 2-3 km long used to irrigate 160-170 hectares of agricultural land in the area along the river to Bantul Regency. The existence of an irrigation canal in Gajah Wong River was used by youths and local residents to cultivate tilapia which later went viral through social media because it was considered unique. As it began to be known by the wider community, then an initiative emerged to develop fish farming into an ecotourism and several tourist attractions appeared on the banks of the Gajah Wong River.

There are several things to consider necessarily in developing ecotourism, The International Ecotourism Society mentions eight ecotourism principles to be met: 1) preventing and overcoming natural and cultural damage when carrying out tourism activities, 2) preserving the environment, 3) generating income for the area or ecotourism area developed, 4) involving the community in planning, 5) harmonizing with nature, 6) generating income for the surrounding community, 7) paying attention to the carrying capacity of the environment, and 8) creating great opportunities to generate foreign exchange for the country (Smith & Sharicz, 2011; TIES, 2019). In the practice of developing river ecotourism on the banks of Gajah Wong River, the eight principles aforementioned have been successfully implemented despite not fully successful, one of which is the creation of river ecotourism aimed at overcoming river damage caused by pollution (Jeurissen, 2000).

The involvement of other supporting parties is inseparable from the process of realizing a new economic space in the form of river ecotourism on the banks of Gajah Wong River. These parties play their respective roles. Henri Lefebvre calls this space a "Representation of Space" or "Conceived Space" in which spatial planning ideas vary according to the conceptualized space then studied and set forth in a written document that can be published to everyone. Several actors who have a stake in its application are involved in planning river ecotourism on the banks of Gajah Wong River, including: Local residents (Kulusjärvi, 2020).



Giwangan Sub-District Management, FORSIDAS Gajah Wong (River Community), Yogyakarta City Tourism Office, Universities in Yogyakarta, Yogyakarta City Culture Office, State-Owned Enterprises (BUMN) and private companies, and others are involved in the development of Gajah Wong river ecotourism (Lefebvre, 1991; Schmid, 2008).

Following the creation of new conceptualized space, river ecotourism, the next step is to enter the dimension of “*Representational Space*”. It refers more to space that is actually “alive” or referred to as “*lived space*” the main focus of which is related to the symbolic dimension of space referring to several benchmarks such as: material symbols, luxury, country, logo, masculine or feminist principles, and other benchmarks. Some examples of symbols that can be applied in this dimension, such as symbols taken from nature or tangible symbols such as buildings, artefacts, monuments, or even both of them, such as urban landscapes. The experiences the individuals have give rise to the conception of space as a causal dialectical relationship between the previous dimensions, namely spatial practices and spatial representations (Kulusjärvi, 2020). Individuals, groups, or communities perceive space specifically, then space is referred to as “*perceived space*” or perceived space (Lefebvre, 1991; Schmid, 2008; Ghulyan, 2019). So far, the material symbols in Gajah Wong river ecotourism are still in the form of buildings supporting the management of river ecotourism. Ecotourism on the Gajah Wong River has become an economic space for the city ready to use to gain economic benefits for the people who live living around it.

Besides, the river ecotourism has a very large opportunity of being urban economic space because of the limited land in Yogyakarta City making it impossible to develop other tourist destinations on city lands that have been converted into densely populated settlements. Even so, the leading tourist attractions in Yogyakarta City still exist and are visited by many tourists, as shown by the following data.

Number of tourist visits in tourist destination areas

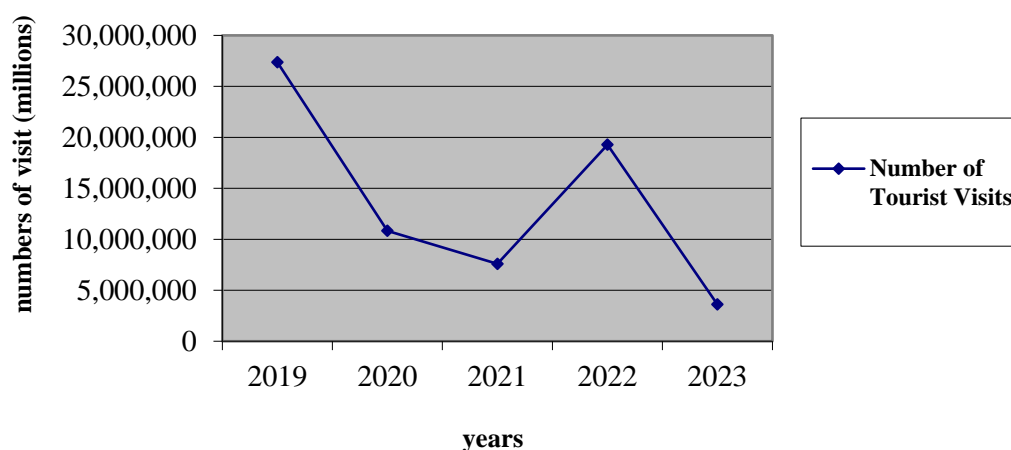


Figure 1. Number of tourist visits in Yogyakarta city tourism destinations
 Source: DIY Tourism Office/processed by author

The data above shows that the number of tourist visits have begun to increase following the Covid-19 Pandemic. It can be seen from the number of visits reaching its peak with 27,365,291 people in 2019 (before the Covid-19 pandemic). In December 2019 the Covid-19 pandemic occurred and made the number of tourists decline dramatically in the following years: only



10,830,143 the highest percentage 19 Pandemic in 2022 and the figure would increase again to 19,275,989 tourists. In early 2023, about 3,604,788 tourists have visited the city and this figure is expected to increase (Bappeda DIY, 2022). From the data above, the number of tourist visits has increased continuously following the Covid-19 Pandemic, so this can be used as an opportunity of developing river ecotourism which can be used to support the leading tourism in Yogyakarta city and the production of the city's economic space to improve the people's lives and to increase tourist attractiveness (Wibisono et al., 2023).

The impact of river ecotourism development on Gajah Wong riverbank communities

Communities along the river also feel the positive impact of ecotourism development on the banks of The Gajah Wong River. The following are some positive impacts of river ecotourism; 1) the creation of new job opportunities for people who do not or do not yet have decent jobs with the significant development of MSMEs through river ecotourism, 2) being an effort to empower riverbank communities, and; 3) being an effort to change the behaviour of people who are more aware and care about the environment. *Firstly*, the creation of new job opportunities with the significant development of MSMEs through the river ecotourism gate is related to the initial conditions of the riverbank community which are synonymous with inadequate uncertain job opportunity. Prior to river ecotourism, many people living on the banks of the river did odd jobs, as commercial sex workers (Indonesian: *Pekerja Seks Komersial* or PSK), hawkers and street vendors near the Giwangan terminal, unemployment and other jobs. The presence of river ecotourism provides positive energy; therefore, people's lives change for the better. The amount of daily income cannot be ascertained due to the unfixed type of work. This makes many people find difficulties in meeting their daily needs. In addition, MSMEs also have the potential to develop through river ecotourism. Support from various parties such as government, private sector, etc. is needed to provide facilities in product development, marketing strategy, packaging, material selection, product registration, and so on. So far, there are still many producing-MSMEs finding difficulties in doing so because there is no guidance and direction from professional parties; this must be evaluated immediately to enable MSMEs to develop rapidly.

The existence of river ecotourism creates several new types of job opportunities for the community: traders, tour service providers (such as tour guides, parking attendants, and the like) and tourism managers. The creation of new job opportunities has brought benefits that can be used to meet the needs of daily life. Profits are often associated with economic advantages expected to benefits the society (Elkington, 1998; Smith & Sharicz, 2011; Aras & Crowther, 2013). With an average income of IDR 50,000 per day. The number of tourist visits to the Gajah Wong River ecotourism has increased and can even reach around 500-700 people visiting on weekend or holiday. The sellers there would get a profit of up to IDR 500,000. This is certainly a better condition compared to conditions before river ecotourism existed. There are three tourist objects (ODTW) developed on the banks of Gajah Wong river: *Bendhung Lepen* tourist attraction, *Dermaga Cinta*, and *Kampung Kelengkeng*. Each of tourist objects offers a tourist attraction and uniqueness, for instance, the *Bendhung Lepen* tourist attraction offering fish tourism as its main attraction, *Dermaga Cinta* offering riverside tour as a superior attraction, and *Kampung Kelengkeng* offering educational tour about longan cultivation on narrow land.

Gajah Wong River Ecotourism is not only about places to go on vacation or travel but also presents several tourist attractions such as educational tour to get to know fish species, longan plant cultivation, and river crossing. For this reason, other potential developments are still needed, such as the historical and geographical side. Viewed from a historical standpoint, tourists can be entertained with various kinds of stories, from the history of the Islamic



Mataram Kingdom located close to Gajah Wong River, the history of the Giwangan Village before it turned into ecotourism, to the process of changing the face of the river into ecotourism. The use of the slogan "Yogyakarta as Tourism and Student City" will be very effective, by integrating tourism into education to give an impression to tourists. This has been carried out by several river ecotourism such as the Barito River Ecotourism in Banjarmasin, South Kalimantan and the Chao Phraya River Ecotourism in Thailand. They combine the potential of nature and rivers, historical and cultural sides, and knowledge improvisation (Irawanti & Darmoko, 2022). They make a tourism development strategy through culture, by elevating traditional culture or local wisdom into a unique potential to increase profits.

The need for further development of ecotourism is evidenced by the lack of income earned, because there is neither retribution nor entrance fee collected from the three ecotourism, only parking fee is charged sincerely when tourists bring their vehicles. This is also a strategy to attract tourists to visit ecotourism because it is different from other tourist destinations in general. The income earned by the local community comes purely from the selling of food, goods and services. Meanwhile, the income from parking fee is managed again with a distribution of 20% for mosque construction, 30% for tourism management costs and 50% for all parking attendants. In addition, the monotonous presentation of tourism will cause boredom to the visiting tourists and it will have an impact on the decreased income; thus, tourism product development is needed.

Product development is carried out aiming at increasing the profits obtained. Product authenticity and uniqueness are criteria that must be considered so that they become the hallmark of that place not found elsewhere. These characteristics will become a new attraction for tourists to visit and have an impact on the number of tourist visits (Suhartawan, 2022). Local wisdom in Giwangan Village has not been used optimally; it should be used to preserve traditional culture and develop new products for ecotourism because tourism inseparable from culture (Lenggogeni, 2017). Some of the cultures owned include: *gamelan*, traditional dance, traditional food, etc., constituting the symbols of original local cultural values that will be preserved (Sims, 2009; Demartoto, 2013). This has been implemented in Barito River ecotourism in Kalimantan and Chao Phraya River ecotourism in Thailand which utilizes local potential in the form of Floating Markets and is developed in combination with modern culture. The Floating Market is not only a place to transact agricultural products such as vegetables, fruits, rice, corn, and others, but has also been developed into a modern market that is able to attract many consumers. This can be modified in Gajah Wong river ecotourism operations for the development of tourism products carried out by the local community, traders, government, and private parties (Irawanti & Darmoko, 2022; Normelani, 2016).

In addition, culinary tourism which is becoming a trend should be developed further there. Because food is a basic need for tourists that can be used as a strategy to attract tourists and the visitors spend 25% of their money on food and drink on average (Achmadi et al., 2023). More tourists are looking for regional specialties in the form of traditional foods not existing in other regions. Culinary tourism is a new concern for tourists who care about local culture and heritage so it has great potential to develop (Maring & Hasugian, 2015; Kulusjärvi, 2020). Even though it has started to be developed, much evaluation remains to be made because the local potential has not been utilized yet optimally (Sims, 2009).

Secondly, it functions as an effort to empower riverbank communities often referred to as marginalized communities with limitations both socially and economically. Thus, the development of ecotourism not only focuses on how to get financial benefits, but also seeks to empower the people who live on the banks of the river (PBPK Yogyakarta, 2022). The element of "people" in the triple bottom line relates to the people living in the areas developed (Raar, 2002). Nonetheless, the local community has more knowledge about the ecological system in



which they live and even the local community also has a close relationship with the environment and its natural resources (Elkington, 1998). Empowerment is carried out to enable the people to improve their own quality of life independently. In managing ecotourism on the banks of the Gajah Wong River, the local community has been fully involved with the assistance of the Giwangan Village, the Yogyakarta City Tourism Office, and the river community (FORSIDAS Gajah Wong).

The successful development of Gajah Wong river ecotourism should be appreciated because it has changed the face of the river from a bad condition originally into the better one (Rogerson, 2023). Just like the development of the Karaj River ecotourism in Iran which has opened up new types of jobs that are able to support the lives of its people to be better (Goharipour & Hajiluie, 2016), in the Gajah Wong river ecotourism, some new job opportunities have emerged: traders, tour guides, performers, parking attendants, and etc as aforementioned. However, in its operations, human resources must also be utilized optimally if you want to achieve the empowerment aspect. Collaboration between the local community, the government and the private sector will facilitate the goal of empowering the community to make their lives better (Setiyowati et al., 2016). The middle and upper generations can be directed to supervise ecotourism operations or become traders there. The younger generation is directed to make attractive promotion strategies so that tourism will be increasingly recognized by the public because it is this that masters and follows the development of technology. Therefore, the products produced by tourism should be able to be promoted by utilizing the increasingly sophisticated technological developments. This is a strategy to reach many people like communities such as cycling, scooter, rollerblading, and so forth, the associations of a hobby combined with skills and knowledge and manifested in the form of a community (Ulfa et al., 2022). So far, the marketing strategy carried out by the Sungai Gajah Wong ecotourism manager still uses conventional methods despite the use of social media (Goharipour & Hajiluie, 2016; Indika & Jovita, 2017; Nugroho et al., 2018).

Nevertheless, local communities have played a role in the Gajah Wong River ecotourism operations. However, what is lacking in this aspect is that there is no clear benchmark from the Triple Bottom Line theory to ensure community empowerment. There are five dimensions of successful empowerment mentioned by UNICEF. They are: strengthened public sector and community, accountability to affected populations, civic participation and improved governance, social and behaviour change, and social evidence (UNICEF, 2018). In this stage, the community has reached all the dimensions so that the community can be said to be empowered even though it has not been maximized yet. Despite less optimality, the aspect of "people" has also been achieved (Elkington, 1998). The problems also encountered by some other ecotourism are, among others, inadequate participation, the community experiencing saturation, the inactive government, and so forth because this is a challenge to Community Based Tourism (CBT), just like that in Swaziland (Mearns, 2014). The existence of obstacles has resulted in CBT not running optimally so that it still needs a lot of evaluation to achieve its intended goals.

Thirdly, it functions as an effort to change the behaviour of people who are more aware and care about the environment where the river plays a big role in maintaining the balance of the city's ecosystem. The Gajah Wong River is a source of water for agricultural irrigation so that the quality of the water must be maintained. The concept of river ecotourism is the utilization of nature to obtain profits that are used to meet the human needs. However, humans often forget the sustainability of "planet" environment and are only "profit"-oriented. In fact, the three elements -profit, people, and planet - are interconnected and need to balance the three (Jeurissen, 2000; Smith & Sharicz, 2011). Ecotourism has provided financial and ecological benefits. The creation of river ecotourism has made the riverbank communities care more about

the environment. Because the environment can be used to gain economic benefits, economic and ecological problems in riverbank communities can be resolved.

The changes in people's behaviour are proven by concern with the maintenance of existing facilities and infrastructure in the Gajah Wong River ecotourism. They are aware that facilities and infrastructure are very important to the ecotourism operations because they affect the comfort of tourists. The existing facilities and infrastructure at the Gajah Wong River ecotourism are quite adequate but some development is still needed to keep the ecotourism interesting and not boring, including the maintenance and cleanliness of facilities and infrastructure. They are fully aware of cleaning the river ecotourism environment so that it is free from dirt and creates the comfort of visitors. They are aware that if the facilities to meet these needs are not provided properly by the tourism manager, the tourists will unlikely revisit the destination because there is no comfort available at that place (Goharipour & Hajiluie, 2016; Pynanjung, 2018). It is because ecotourism is a space used to earn income to meet their daily needs; thus, if they do not take care of it, they will lose some income and other opportunities. Providing a safe and comfortable place to tourists is one of strategies to attract tourists to visit (Goharipour & Hajiluie, 2016). If number of visitors increase, revenue will also increase. Tourism capable of changing people's lives can also be found in Pelabuhan Ratu and Pangandaran Answer Barat where tourism is able to absorb labour and to increase the people's income (Abdillah et al., 2015). In South Borneo, ecotourism was also chosen as an effort to prevent forest fires as well as an environment-friendly business in the context of community-based conservation, as in Tanzania (Chrismansyah, 2022; Bluwstein, 2017). Society must be presented with something that is beneficial to raise awareness of the environment. Apart from that, in this case the government is still a very important actor (Viljoen & Maphosho, 2023).

Statistical test on the correlation between “the duration of work in ecotourism operation” and “the income earned”

The economic impact of river ecotourism can be seen from the results of statistical correlation tests using data from 40 respondents including people who are active in river ecotourism operations as measured by "duration working in ecotourism operations" and "level of income earned".

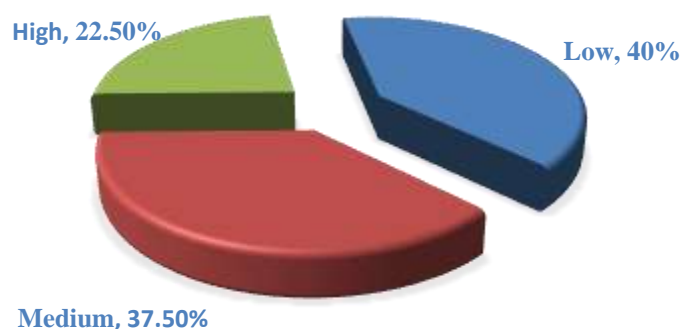


Figure 2. Duration of work in ecotourism operations

Source: Primary data obtained through a quantitative approach using IBM SPSS

Based on the data found, it can be concluded that the highest percentage the people who work with low duration (between 0-4 hours per day) in river ecotourism operations has the highest percentage (40%), work with medium duration (4-6 hours per day) has the medium percentage

(37,50%), the rest are those who work long hours (6-8 hours per day). This shows that the community has not taken full advantage of opportunities of earning income.

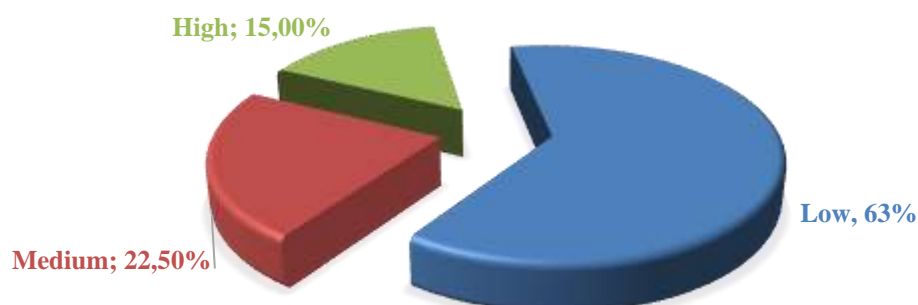


Figure 3. Level of income earned

Source: Primary data obtained through a quantitative approach using IBM SPSS

Considering the data aforementioned, it can be seen that the average income earned by the community is still relatively low (62.5%); this is related to the duration of work in ecotourism operations having not been utilized optimally. So, the hypothesis of research is that there is a relationship between the duration of work in tourism operations and the level of income earned. Based on the two diagrams it can be seen that the duration of work in tourism operations is directly proportional to the level of income earned where at the low level the two variables have the highest percentage, with the duration of work (low) of 40% and the level of income (low) of 63%.

Product moment correlation analysis

The results of the product moment correlation between the variables X and Y show the significance value less than 0.05 as a basis of decision making, equal to $0.001 < 0.05$. The value of 0.001 is still significant at $\alpha = 0.01$. To find out the significance of the relationship between working duration variable in ecotourism operations (X) and income level variable (Y), then r_{xy} statistic and r_{xy} table will be compared and the result is obtained r_{xy} statistic $>$ r_{xy} table equal to $0.505 > 0.320$. So, in conclusion, there is a relationship between the duration of work in ecotourism operations (X) and the level of income earned (Y). Based on the Correlation Coefficient Guideline Criteria, r_{xy} statistic = 0.505 indicates the moderate relationship between the two variables.

Table 1. Result of Statistic correlation using SPSS between duration of work in ecotourism operations and level of income earned

		Duration of work in ecotourism operations	Level of income earned
Duration of work in ecotourism operations	Pearson Correlation	1	0.505**
	Sig. (2-tailed)		0.001
	N	40	40
Level of income earned	Pearson Correlation	0.505**	1
	Sig. (2-tailed)	0.001	
	N	40	40

Source: Primary data obtained through a quantitative approach using IBM SPSS



From the results of statistical tests through product moment correlation, it can be concluded that there is a relationship between the duration of work in ecotourism operations and the level of income earned so that river ecotourism created in the Gajah Wong river has an impact on the economy of riverbank communities. It is also indicated with the average income of the community reaching IDR50,000 up to IDR500,000 everyday, used to meet primary, secondary, and even tertiary needs.

Discussion

The importance of discussing integrated ecotourism planning to achieve sustainability

Innovation in tourism management is needed because it must be adapted to the times. The city of Yogyakarta, which has great potential to boost Indonesia's tourism industry, must innovate and develop existing tourism objects and potential to prevent saturation in the future. The opportunity for tourism to become a large industry is very open by combining several combinations such as hotels/inns, souvenir centres and restaurants, souvenir centres, the service sector such as transportation including pedicabs, horsecars (*delman*), motorcycle taxis, etc, photography and so forth can be used to absorb labour. The development of small tourist destination growing out of community initiatives needs to get more support from the government so that people are more enthusiastic about carrying out their roles. One of them is the development of river ecotourism in riverbank areas, which can help solve some of the complex urban problems. River ecotourism is able to provide new jobs for people and youth having no job, to raise public awareness about the importance of protecting the environment so as to reduce pollution and slum settlements along rivers, and to create new economic spaces in urban areas useful for improving the quality of life of the riverbank communities.

In addition, there must be planning related to an integrated ecotourism discusses how the Gajah Wong River ecotourism has one-stop management and can combine all the potential and existing components of the Gajah Wong River. Indeed, to make this happen a lot of time, high cost, and longer process are required because it is related to the people's habits. However, a more careful planning will bring a sustainable impact. However, to achieve integrated ecotourism, other elements than profit, people and planet must be added, policy and technology. Policies are needed to exercise control, while technology is used to disseminate social networks. Thus, the 3P elements are not enough, it must be balanced with policies and technology that go hand in hand. The sustainability aspect has not been answered in this study, so further research is needed to measure and to prepare the sustainability strategies in this ecotourism.

Conclusion

The situation between before and after river ecotourism can be compared because many changes have occurred in people's lives. The change in the face of the river from a slum into a new urban economic space has a significant impact on the welfare and prosperity of the surrounding community. In the production of space, new space is created due to cause and effect. The arrangement of riverbank slum areas initiates the creation of river ecotourism because it is considered as an alternative solution to improve the people's standard of living.

The research method used is a mixed method with a dominant qualitative, less prevalent quantitative scheme, mixed qualitative and quantitative methodology. Qualitative method is used to deepen the issues raised related to river ecotourism development and the quantitative one is used to generalize that the existence of river ecotourism has an impact on the economy of riverbank communities as measured using the variables of duration of work in ecotourism operations (variable X) and level of income earned (variable Y)). The method determines the direction of analysis in line with the research results.



The creation of river ecotourism provides benefits much the people's lives, especially economically. Some of the benefits obtained from river ecotourism are the creation of new job opportunities for people who do not or do not yet have decent jobs with the significant development of MSMEs through river ecotourism, 2) an effort to empower riverbank communities, and; 3) an effort to change the behaviour of people who are more aware and care about the environment.

Based on the product moment correlation, it can be found that there was a significant relationship between the variables of duration of work in ecotourism operations and income level (Y) of 0.505 at a significance level of 0.001 less than $\alpha = 0.01$. Therefore, it can be generalized that river ecotourism has an impact on the community's economy including the level of income to meet daily needs. The sustainability of ecotourism must be considered because maintaining is more difficult than creating, so it requires a strategy to create sustainable ecotourism to maintain properly the balance between the three elements (profits, people and planet). River ecotourism deserves to be called an alternative solution in the production of urban economic space.

Managerial implication

This study has found out that the urban economic space can be created by changing the face of a slum river into a profitable river ecotourism. This proves that not only good and potential spaces can be used as ecotourism but ecotourism can also be created through collaboration between the local community, government and the private sector to turn something bad into something with added value. This can be applied to all with the similar problem to the Gajah Wong River. You can apply the process written in this study.

Ecotourism still needs more in-depth study because nature is often used to the fullest extent but there is no feedback for nature so that nature suffers tremendous damage. For this reason, such studies need to be carried out so to be a matter of consideration in using nature as tourism. One thing that needs to be known is that nature has a limited ability of providing diverse human needs, so feedback between humans and nature is needed to generate maximum profit and to prevent everyone from being harmed.

The theoretical framework used in this study can be used to analyse policies related to the creation of new urban spaces, including economic space. In addition, the principle of sustainability must be studied in planning a policy that balances profit, people and planet because the planetary element is often overridden and the focuses concentrated on the profit element only. This study has contributed to increasing the people's income or "profit", but some limitations are still found in terms of developing "people" human resources and calculating the carrying capacity of the "planet" environment so further study is still needed on it.

The study identified several findings related to the benefits of river ecotourism including increasing people's income, improving community empowerment through MSMEs, creating new types of job opportunities, and improving the public awareness of environmental preservation to achieve sustainability. River ecotourism have had a significant impact on the people's lives, changing from the one previously having limitations into a new, profitable face. The creation of economic space through ecotourism also strengthens the tourism industry in Yogyakarta City and makes it more varied because so far only few tourist destinations have been visited by tourists: Malioboro, Keraton Yogyakarta, Taman Sari, and other quite familiar destinations. The development of ecotourism is an alternative solution to the development of tourism industry in Yogyakarta City because the limited land ownership will obstruct the development of other tourism so that the only land that can be developed as tourism is the land on the river banks. In addition, the development of ecotourism can also be used to solve the problem of riverbank slum settlements, through providing an understanding that the well-



maintained environment can be a medium for obtaining profits because it has added value. Through developing river ecotourism, people will slowly adapt to new environment and culture. Moreover, the environment now provides many benefits, especially economic benefits, so that people will care more about environmental sustainability.

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