CLIMATE IMPACT AND CULTURAL SHIFTS IN NATURAL STRUCTURES AND HUMAN LIFE: A RIVER AREAS UTILIZATION AS COMMUNITY-BASED ECOTOURISM

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ABSTRACT

The Climate change in world tourism can change the system of human life and its influence on nature. The development of the global digital tourism climate, selfie tourism is able to change the attitude of individual behavior in response to the demands of competitive life. The development of tourist destinations in the world, primarily from natural factors, the demands of a sharp competitive climate require tourism managers to create artificial innovations that are developed from natural potentials that are more attractive in design so that they become alternative ecotourism idols capable of boosting tourism growth that is more conducive and attractive. This research develops river ecotourism areas which are oriented to aspects of environmental development, nature preservation and local community development. This study uses qualitative research so that it can explore various aspects of the natural and humanity of the region in depth through the empirical phenomena that exist in the field. The real condition of river area which is not well managed is not in accordance with the development of Smart city, community awareness and tourism activists who are less focused. Hence, it needs community empowerment and encouraging the role of tourism activists to play more in the development of urban areas, and the use of river as ecotourism.

Keywords: Ecotourism, Waterfront, Natural Resources

INTRODUCTION

The influence of climate change in the world tourism in the era of globalization driven by development of information and communication technology (ICT) millennial has created a lot of climate change in natural and human structures that are relatively fast following the demands of global tourism needs. The development of tourist destinations around the world from each country creates a variety of innovative destinations with their own tourist attractions. Now the growth of tourism is becoming very competitive. Current shifts also trigger not only the development of tourism from natural attraction, but also the attraction of artificial tourism which is also with a more exclusive and attractive design.
Changes in the mass tourism climate are changing alternative tourism, pushing Yogyakarta Tourism does not want to be left behind and each district has developed an attractive tourist destination design.

![Image](image_url)

**Fig.1: Artificial tourist destination, “Heha Sky Views” Pathuk Yogya Indonesia**  
(Source: Private Photos, 2019)

With an innovative design that is specific in combination with local wisdom aspects of local culture so that it can bring many tourists to visit. Destinations to the south coast, cave and mountain areas, hills with attractive designs. Breksi cliff has been able to absorb many visitors every day, the new tourist destination HEHA Sky Views in the Pathuk Gunung Kidul area, its location in the mountain area is very beautiful design especially for selfie events in the afternoon and evening. The existence of the tourism potential of natural assets in DIY: mountains, sea, beaches, islands, Cave, cliffs, waterfalls, rivers, as well as flora and fauna that have various potential attractions. Special Region of Yogyakarta (DIY) has many interesting tourist attractions such as tourist destinations: Breksi Cliff, Becici, Pine Forest, Temberlan Gorge, Oyo River, Garden tops, Thousand Stone, Obit House, Mangunan, Heha Sky views. Various southern seaside tourism objects from Kulon Progo Regency: Sermo Reservoir, Kali Biru, Kedung Pedut, Glagah, Mangrove Forest, Cemara cave. Bantul Regency: Baron Beach, Parangtritis, Parang Kusumo, Pantai Baru, beautiful Cemara Beach. Tourist destinations in Sleman Regency: World Land mark, Stonehenge, Lost world, Ulen Sentalu, Merapi Museum, lava tour, all of which are designed by the tourist community to always be developing and interesting. Destinasi wisata di Kabupaten Gunung Kidul: Goa Pindul, Sri Getuk serta kawasan pantainya: Wedi Ombo, Siung, Krakal, Baron, Kukup, Indrayanti, Sepanjang, Timang, etc yang selalu dipenuhi wisatawan.

Changes in the tourism climate by developing innovations that use natural assets which are commodified as artificial tourism as an attraction for tourist
destinations. The DIY tourism destination assets above have been able to boost the number of domestic and foreign tourists coming to Yogyakarta. Various hotel accommodation business opportunities, tourist trips, culinary products: restaurants, cafes, bars, warung, angkringan mushroomed in the city of Yogyakarta. Changes in the tourism climate from natural aspects and human involvement are in fact able to create benefits for the socio-economic welfare of the wider community. The empirical phenomenon of the city of Yogya is a river area that has not been well managed.

LITERATURE REVIEW
Strategic Aspects Of River Areas In The Concept Of Sustainable Ecotourism Development

The river in the world has become an idol as an ecotourism capable of boosting the growth of national tourism, so that various business opportunities using the river area as a waterfront are a promotional business area. In accordance with the commitment of the world community in the development of sustainable areas (mother of nature). The development of environmentally friendly ecotourism (green tourism) is currently the application of a joint commitment of 189 countries in the world including Indonesia “The Global Goals for Sustainable Development”. The development of sustainable global tourism is a set of targets which for the social and economic aspects of society end poverty, fight inequality and injustice and improve climate change that benefits everyone until 2030 (Guterres, 2019).

Fig 2. Sicao Lyshe Tunnel (Annan) Taiwan And Sungai Dotonborti, Osaka, Japan
(Source: Private Photo Media Travel, 2019)

The development of the Sicao Lyshe river ecotourism (Fig.2) in Annan City, Taiwan, created a package of river utilization which was also once revitalized and managed to be good and attractive. Along the Sicao River planted with evergreen shrimp and mangrove trees the ends of the trees are curved together, so that river cruising along the river is worth entering the natural cave. Tourists who enjoy river ecotourism aboard a boat using life jackets, clothes
and hats typical of Taiwan (caping: Java), as if tourists are told to play a role of Taiwanese people who travel along the river is clean and very beautiful. The arrangement of the river on the left bank of the river is full of evergreen shrimp trees that flourish with a curved design, so as if entering a tree cave which when the sun breaks through the trees creates a very beautiful and colorful.

A unique tourism climate change in Japan is an innovative picture of the arrangement of the Dotonburi River area (Fig.2), Osaka, Japan, which is able to positively impact tourism development as a beautiful and attractive city ecotourism icon. The condition of Dotonburi River, Osaka, Japan, which is also not too wide, flows through the shopping area, after it has been arranged and developed into a river tourism destination "Dotonburi River Cruise" which is a leading ecotourism capable of bringing in many tourists at this time (Media travel. 2019).

The Impact Of Alternative Cultural Changes Affects Humans And Tourism

The cultural shift implications of the structure of natural phenomena and the implications of the construction of multi-storey buildings that use glass walls, forest fires, vehicle pollution, have implications for global warming, and a very significant increase in population in DIY, and the narrowing of green areas (green areas) due to the large number residential and hotel construction. Migrant and outgoing populations are out of balance. Yogyakarta as a City of students the number of migrants who want to study in Yogya is not balanced with the number after graduating back to their respective regions. The development of DIY tourist destinations and attractions synergize with the increasing number of domestic and foreign tourists which has implications for environmental damage and traffic congestion in DIY. The influence of weak management of tourist attractions management, infrastructure of the City and low public awareness (people awareness) of environmental management and DIY tourism areas.

The development of urban areas in accordance with the concept of DIY smart city 2012, has not been responded well by the community and policy holders, so that the river areas in Yogyakarta as a place to dispose of waste and family waste, on the contrary innovate the development of river areas as ecotourism in Yogyakarta based on competence CBT (Community based Tourism) tourism community has not been touched, not like in the city of Solo, Banyuwangi, Denpasar Bali, Bandung and Jakarta as well as Surabaya which has been able to revitalize the river into an attractive city tourism area. The main factor in the development of ecotourism areas based on CBT is primarily is the active role of government and tourism activists (pentahelix) for community-based ecotourism development (CBT) is a development approach that emphasizes the economy and community empowerment.

The concept of DIY tourism development responds to the changing global climate of world tourism, with concepts such as the following:
Development Concept of DIY Tourist Destination

<table>
<thead>
<tr>
<th>Tourist Attraction</th>
<th>Cave Tourism</th>
<th>Musical Performance</th>
<th>Nature</th>
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<tr>
<td>Tourist Event</td>
<td>Adventure Tourism</td>
<td>Reunion</td>
<td>MICE</td>
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<td>Tourist Facilities</td>
<td>Cultural</td>
<td>Transportation</td>
<td>Hospital, FKL, Bank, Etc.</td>
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<td>Tourist services</td>
<td>Airport, Airplane, Etc.</td>
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Fig 3. Design The Concept Of Developing DIY Tourist Destinations
(Source: Yogyakarta’s Departement of Tourism, 2017)

Related Works

Changes in the tourism climate have been addressed by all nations in the world through the commitment to sustainable global tourism development (Ardiwijaya, 2004) which emphasizes the implementation of tourism that is responsible for meeting the needs and aspirations of the latest human without compromising the potential fulfillment needs by applying the principle of economic viability (economically-feasible), environment (environmentally viable), social (socially acceptable), and technologically appropriate.

Furthermore Ardiwijaya (2004) said that the government of the Special Region of Yogyakarta (DIY) participated in understanding sustainable development in accordance with the agreement of The Global Goals for Sustainable Development in point 11, namely "Sustainable cities and communities" by applying urban environmental development. Raising awareness of the problems can further promote the program of sustainable tourism development goals agreed by the United Nations (Antonio Guterez) with a number of 189 countries in the world.

Tourism development needs to pay attention to how to guarantee sustainable development (Widodo, et.al, 2010) through the use of a natural resource, equity aspects of social, political rights, education, health and technology. The concept of sustainability implies that there is a link with the concept of carrying capacity that can be used as a measure of the achievement of sustainability of a development activity. River management efforts need to explore, study and understand a potential as well as obstacles in their use to the local community. Based on several studies of theories related to the principle of CBT (community based tourism) conservation, the utilization of the development of these potentials must be based on environmentally savvy with the support of science and technology.
based on the community, the research is a theoretical gap from the development of river areas as ecotourism which is universally sustainable and measurable by balancing the three dimensions of sustainable development, namely the environment, social and economy (Lupiyanto & Ribut, 2009).

Changes in natural structure due to the development of ecotourism that uses the concept of community-based development can be interpreted as joint management, namely development carried out by the community together with the local government, which aims to actively involve local communities in planning activities for sustainable tourism development objectives (Simon Anholt, Moilanen, & Rainisto, 2009). Ecotourism is also one of the mechanisms of sustainable development (sustainable development), and ecotourism is also one form of alternative tourism that arises as a consequence of dissatisfaction with the form of tourism that pays little attention to the social and ecological impacts of nature or the river, which is more concerned with economic benefits and human comfort alone. The Indonesian government has sought to develop tourism based on the potential and ability of the community to manage Nugraheni tourism activities. E (2002). This is in order to provide maximum benefit for tourism activities for the community. To ensure broad participation in building shared commitments. Meanwhile, sustainable tourism is a continuous process, which requires continuous monitoring of the impact of the problem, to determine the necessary preventive and remedial steps going forward. The development of sustainable tourism must also maintain aspects of tourist satisfaction by paying attention to their good and helpful comments.

Related to ecotourism development according to the CBT concept (Ribut Lupiyanto, Donan Wijaya, 2010) ecotourism development is a process of changing community communities to create added value in all aspects and social conditions of society which includes social relations, manners and manners in ecotourism destinations which can be developed for the welfare of the wider community.

Ecotourism development must be a community-based activity, prioritizing the resources and uniqueness of the local community, both physical and non-physical elements, from the cultural traditions inherent in the community and is the main driving element of the ecotourism activity itself (Murphy & Sunaryo, 2014). Relating to solving the problem of ecotourism development mainly through participatory local appraisal (Lupiyanto, 2003). The participatory approach in managing the river environment is the main reasons for: the type of participation and the perpetrators, the supporting elements, the level of participation, the role of the policy holder, the grace period, program components, mechanisms, monitoring and evaluation of work related to human factors which are the key or the main basis of ecotourism development (Chambers and Robert (2006).

Community development is a planned change effort made to improve the diversity of the social system, in accordance with an agreement that has
been formulated together. In essence, the instrument used is community-based empowerment. Widodo B (2010) added that efforts to empower local communities are related to efforts to explore, study and understand a region's potential as well as to utilize its environmental aspects. The selection and application of technology that is appropriate and more simple, practical but must be environmentally sound, so that integrated river management can be integrated into the concept of community-based development. Furthermore, sustainable environmental management must have an ecological, economic and social dimension, with the use of the concept of community-based development. (Widodo, 2010).

Changes in the world tourism climate can have a positive influence on the design of local community empowerment processes, a process that starts to make people independent so that they can improve their own standard of living through a series of activities as follows (Su kmawati & Delivery, 2004) namely:

1. Know the characteristics of the local community (local) to be empowered, including differences in characteristics that distinguish one village community from another (getting to know the local community).

2. Gathering knowledge concerning information about the local community (gathering knowledge about the local community). This knowledge is factual information about population distribution according to age, gender, occupation, education level, socioeconomic status, including knowledge about values, attitudes, rituals and custom, type of grouping, and leadership factors both formal and informal.

3. All efforts to empower the community get support from leaders / local community leaders (identifying the local leaders). The "local leaders" factor must always be taken into account because it has a strong influence in the community.

4. Community empowerment is aimed at increasing the potential of the community to be able to improve a better quality of life for all members of the community through self-help activities.

5. To achieve this goal, the factor of improving the quality of human resources through formal and non-formal education needs to be prioritized.

6. Empowering the community aims to educate the community to be able to educate themselves or help the community to be able to help themselves.

7. The objectives to be achieved through community empowerment efforts are an independent, self-sufficient society, capable of adopting innovation, and having a cosmopolitan mindset.

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Multi-dimensional and multi-structural tourism is one of the important industrial sectors and has great potential and opportunity to be developed. Tourism has a broad spectrum of nation-wide development starting from as an instrument of national unity, the eradication of poverty, sustainable development and economic improvement. (Evita, et.al, 2012). Through structured regional development planning to be able to identify development problems faced, so that development programs can be formulated based on an analysis of their economic potential (Vini & Wulandari (2007). Tourism coordination is very important which consists of various sectors often causing conflicts of interest in the utilization of community resources (Hermawan & Heri, 2008). The process of ecotourism development can take place in a sustainable manner, from a variety of activities that are cumulative therefore it is necessary to try to increase community participation through actions concerning common interests, such as building public roads, clean water for community, micro-economic endeavors...
so that they will foster mutual trust and shared responsibility (Sutomo & Fardila, 2010).

The development of sustainable ecotourism that supports environmental preservation (nature and culture) by increasing community participation in management, is a potential activity that can be considered as an option for the local economy (ILO, 2012) and provides micro-economic benefits to the local community (Prioono.Y, 2012). Development of tourism oriented to local communities is still minimal and many fail. This is because policy holders still think partially, institutional egos and sectoral egos. They assume the community does not have the financial capacity and quality expertise to manage or be directly involved in tourism activities that are based on nature and culture (Singgih and Nirwana, 2016).

**Theories About Community Empowerment**

Prijono and Pranarka (1996) stated that community development is a process of strengthening the community actively and continuously based on the principles of social justice, participation and equal cooperation. Community empowerment expresses the values of justice, equality, accountability, opportunity, choice, participation, cooperation, and the process of continuous learning. Community empowerment is an effort to improve the dignity of the layers of society which in their present condition have not been able to escape the pitfalls of poverty and underdevelopment. Furthermore, community empowerment is characterized by independence achieved through a process, realized through active community participation in empowering life and the environment, being able to access productive resources (Sumodiningrat, 2000). Community empowerment is a major factor in human capital. Capital Human beings can be measured using three indicators namely (a) level of education, (b) level of health and (c) ability to build interaction between people. The attitude and affective of the community is more complex, which at the beginning is difficult to change and move when compared to their knowledge and skills. (Slamet et al, 2003).

**Theories About The ECOSYSTEM Society**

Agenda 21 Indonesia, which is the elaboration of Agenda 21 Global, has formulated a national strategy in environmental management programs and strategies which are grouped into four areas, namely: community service, waste management, land resource management, and natural resource management.

Policy on the arrangement, development, maintenance, recovery, supervision and control of the environment. Soemarwoto (2001) shows there are 4 types in environmental management, namely:

1. Routine environmental management.
2. Early planning management of an area which is the basis and guidance for development.
3. Environmental management planning based on the estimated environmental impact that will
Empowerment is different for different contexts; and (3) Empowerment fluctuates or changes over time. This assistance is to provide broader opportunities for weak community groups to get protection and guarantees to improve the quality of local community resources (Wrihatnolo & Dwidjowijoto, 2007). Some of the principles of community empowerment can be elaborated as follows: a). Creating an atmosphere or climate that allows the potential for community development. b). Build power, encourage, motivate and raise awareness of their potential and strive to develop them. c). Strengthen the potential or power possessed by the community. d). Provision of various inputs. e). Opening access from various opportunities that can make the community become more empowered (Mardikanto, 2010).

The role of stakeholders in community empowerment includes: a). The government plays a role in creating a picture of the program, finding sources of funds and determining the collection of funds, providing direct services to the public, b). The organization as one indicator in supporting the government as a form of monitoring efforts on government performance. c). The community is the beneficiary of the efforts planned by the government, all of which must be integrated and have an inseparable commitment (Isbandi and Rukminto, 2012).

**Sustainable Tourism Development In The Smart Cities Perspective**

Smart city is a city whose city management system can automatically
notify: (1) that urban problems arise (notified by sensors installed in the city), (2) that urban problems arise (notified by sensors and prediction systems), and (3) urban management systems that are able to provide proposals for automatic action (created by an actuator system) or not automatically to solve problems (Meijer, 2015), (Andari, Puspito & Setiyorini, 2016). According to Chourabi, Abdelsalam & Reddick (2012), Emine mine & Azhar Admin (2016) the concept of smart city is a city that monitors and integrates environmental conditions and all important infrastructure including roads, bridges, tunnels, railways, subways, airports, ports the sea, communication, water, electricity, and even the main building, can better optimize its resources, plan its preventive maintenance activities, and monitor safety aspects while maximizing services to its citizens.

Suhono, et, al (2015). Smart city characteristics can be specified as follows: 1). From the economic side, a smart city is a city that is supported by a good economy by maximizing the city's resources or potential, including information and communication technology services. 2). From the social side, smart cities are cities where people have security, convenience and comfort in carrying out social interactions with fellow citizens or with the government. 3). In terms of smart city environment, it gives people the opportunity to have a decent place to live, and the purpose of the existence of smart cities is to form a city that accommodates both environmental aspects, infrastructure, infrastructure, a safe, comfortable atmosphere for its citizens and strengthens competitiveness the city in terms of its economic life.

Primantohari (2014) states that smart city implementation is able to form and implement a clean, safe, comfortable, controlled environment and facilitate access for its citizens and can strengthen city competitiveness. The goal of supporting smart cities can be explained through proper management, both from the social (security), economic (competitiveness) and environmental (comfort) dimensions. Renata (2016), T Bahaire, & M Elliott-White (1999), Suhono, et.al, (2015) suggested that the development of smart cities in several regions in Indonesia and the world had emerged as a strategy to reduce the problems caused by population growth urban areas of the process of rapid urbanization. The development of smart cities encourages sustainable economic growth and quality of life by managing natural resources through participatory governance. In the smart city program in several regions in Indonesia, the need to apply information and communication technology is an effort to improve regional competitiveness in particular and Indonesia in general. (Saifuddin & Ismini, 2015).

As an example of the success of the ecotourism development of Banyuwangi Regency, the Regent of Azwar Annas who has been able to organize the management of the Kali Lo area for the creation of a smart city must conduct environmental management and regulation around the Kali Lo river. As a result the smart city program was able to create the colors of the city of
Banyuwangi, from which the dirty river environment had been successfully rehabilitated. One of the program activities is to paint buildings and talut wall along the river bank with beautiful paintings to make it look more attractive, and the results of his work uploaded on social media Dirawan (2008), Emine Mine & Azhar Admin (2016).

Hendrianto (2012) said that the development of smart cities in Indonesia is constrained by two things: the large cost and the availability of professional human resources as managers. Smart city management requires complete data so that stakeholders can make effective and efficient decisions based on that data. From some of the above studies it can be concluded that smart cities can be interpreted as a concept of utilizing technology in accordance with their respective cities. Furthermore, smart cities can also be defined as a model of city structuring concept that is integrated in all aspects, both from the community, government, population, health, education, economy, culture, and many other aspects that use the development of communication information technology as one the device. The dirty environment of the Kali Code area is not a major problem in the concept of the smart city of Yogyakarta. In the case of the DIY government having special funds such as other special provincial regions, but to date there is also no idea to build a project to revitalise the use of the Kali Code River as a cultural ecotourism, such as those in other cities (Jakarta, Bandung, Banyuwangi, Solo, Denpasar-Bali). With some of the opinions mentioned above, it can be concluded that the agreed smart city of Yogya must maintain the overall aspects of the city environment, the existence of the Kali Code area in the city will be the main obstacle for the realization of a smart city if not managed properly.

**METHOD**

**Explanation Of The Data**

In this study researcher using qualitative research, the first step is to conduct an inventory of research studies that can generate empirical data relevant to the research. Determining the amount of relevant and quality data in accordance with the problems required in the study. Identify the most crucial and dependability issues that determine the opportunities and challenges in empowering people's innovation, and apply tourism development programs in the field. This research is done by combining some descriptive-evaluative approach so as to get accurate and accountable information (confirmability) from the data of interview result, direct questioner with potential informant and available.

**How The Data Being Collected**

The data collect by direct interviews and questionnaires are grouped into several aspects: (social, environmental, institutional, government, marketing) and expectations. So get the data that is more fundamental, grounded with the problems to be researched. Given in qualitative research, this research is about descriptive research, tend to use analysis. The process and the meaning of the perspective with the subject of research will be more highlighted in this
qualitative research. A study of literature relevant to the research can be used as a guide to focus to the problem. This research can be in accordance with the facts needed in the field. In addition, the bibliography can also be useful to provide an overview of the background of research used by researchers as a discussion of the results of research. In this qualitative research, the researcher departs from the selection of data that has proposition to the research problem, utilizing the relevant literature review and the underlying research analysis (grounded research) as the material that can give the explanation appropriately in the discussion of research, and finally able to create a new study that weighs and more valuable.

The Research Method

To deepen the quality and benefits of this qualitative research the researcher took several studies and opinions of Kriyantono (2012), Stating that "qualitative research aims to explain the phenomenon in depth through the collection of more in-depth data. Qualitative research emphasizes the depth of data obtained by researchers. The deeper and detailed the data obtained, the better the quality of this qualitative research. In contrast to quantitative, the objects in qualitative research are generally limited in number. In this study, researchers participated in research activities to understand the conditions under study. Therefore, the results of this study require the depth of analysis from the researchers. In addition, the results of this study are subjective so they can not be generalized.

In the study of tourism development in certain areas of the Special Region of Yogyakarta, the development of their human capital capital is still far from the real application. Quality standards are expected, that the awareness of tourism actors in the field still not able to accommodate, provide product service to the satisfaction of tourists so that their stay longer (long stay) is still low, and also make the turnover The number of tourists is small, so the amount of money shopping tourists in Yogyakarta is too little. If we want to learn from other countries, in their tourism management, they are truly oriented to the imaging of branding imaging marketing that focuses on the satisfaction of tourists, by applying the factor 4A (Accommodation; Attraction; Accessibility; Awareness). Human Resources are concretely competent in product service awareness. And with a high awareness of loyalty in managing natural and artificial attractions can bring the number of foreign tourists into many of the few studies on the true conditions. Answer the existing tourism business opportunities from decision variables; and the role of local communities as intermedian variables that show how local community efforts can be activated and involved in the development of more competitive tourism businesses.

Objectives Research Study

In accordance with the above problems, this study aims to:
1. Identify how potential Community involvement through empowerment system in supporting the
change climate of nature relate to the tourism development.

2. Explain and provide effective opportunities to empower local communities as an advantage in Sustainable Tourism Development.

3. Maintaining consistently for all communities of DIY pentahelix to support the change climate of human and nature in building creation competitive sustainable global tourism development.

Benefits Of Research

Answering some questions from the research described above is expected by the new brand "Jogja Istimewa" can create a model of community empowerment through the development of awareness of management of tourism business management of Yogyakarta. Local people pay more attention to enhance and maintain all tourism asset in DIY to participate actively as responsible Yogyakarta tourism actors. Sustainable businesses in Yogyakarta can grow and compete more competitively because of the effective role of pentahelix should be able to provide distribution existing DIY Tourism Development.

RESULTS AND DISCUSSION

River Ecotourism Management Through The Role Of Pentahelix 4.0

The changing climate of tourism which is the current trend is the development of environmentally-based tourism in the era of globalization, the application of appropriate technology or industrial concepts 4.O, where the information technology is developing very rapidly must be addressed because it is able to provide extensive information about the problem of the existence of the river basin environment. Integrated river management should emphasize the concept of community-based development. Environmental management must be fully supported by the Pentahelix community, namely tourism activists: Academician, Business, Government, Community, Multimedia (ABGCM), where environmental preservation is the key to sustainable development related to local political dynamics, the role of academics, business, and political will (political will) from the local government (Widodo and Wijaya, 2010). Conservation of the river environment is focused on the management of the watershed both the riverbanks and the water environment. Conservation analysis can be done with land use change and its effect on river water quality (Lupiyanto & Ribut, 2009).

The change in the environment of the City area into a smart city must primarily address the existence of a smart, based environment. UU no. 23 of 1997 the notion of the environment is a unity of space with all objects and unity of living things including human beings and their behavior that carry out the life and welfare of humans and other living things (Munda, 2006).

Banyuwangi Regent Azwar Anas responded by building a commitment to invite all his people to protect the environment of the Kalilo area, which was originally a slum, making Kalilo a clean and beautiful river water ecotourism in Banyuwangi City. This local government project with the management of river cleanliness is an
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effort to improve tourism competitiveness in Banyuwangi district with the slogan "The Sunrise of Java". The management of the Kalililo river area involves all levels of society, by maintaining cleanliness, increasing the benefits of Kalililo in Banyuwangi Regency, so that the river is now getting better and looks with a unique design that is different in a well designed colorful packaging. The goal is to utilize the environment along the river bank (water front), which is well managed and at the same time supports the smart city program (Anas, 2016).

Maintaining Development Of Sustainable Nature Asset Of River Ecotourism

Effendi (2003) states that the potential and strategic prospects for the existence of the Kali Code river area as an asset of nature related to the concept of Jogja smart city. Boo, Lindberg and Hawkins (1993) state that the inherent subjectivity of a misconception in the use of rivers generates concern and is very vulnerable to land abuse and the negative impact of community survival which must be limited by the practical and innovative relevance of its policy holders.

Carter and Beeton, (2004) stated that the orientation of ecotourism development places the facts and evidence of the involvement of the local community, as the main consideration in developing the capacity and capability of the potential that exists in the community. Ceballos and Lascurain (1993) add that the side effects felt by individuals, through positive perceptions of tourists provide broader benefits for local communities. Tourists can cause a positive reaction to the development of ecotourism that is independent of the level of individual involvement in the ecotourism industry itself.

Alternative tourism needs to be understood as an aspect of tourism innovation but it must also consider the utilization of existing potential natural resources, and must be able to be preserved and developed for future generations, as: green tourism; soft tourism; low-impact tourism; eco-tourism; responsible tourism; sustainable tourism; and others. Raharjana (2012), (Hunter & Green, 1995, Paramita, 1998; Mowforth and Munt, 1998: 156-186) stated that the participation of local communities must be seen as important for policy making in the development of regional tourism, and the usefulness or benefits obtained by the community as the implications of the success of the tourism activity. The development of ecotourism from a variety of knowledge and research as stated in the World Tourism Organization (WTO) (1995), Smith and Eadington (1992), Weiler and Hall (1992), show that emerging alternative ecotourism developments are seen as more able to appreciate the environment and culture of the community its local. This fact has now sparked creativity and awareness of the development of environmentally friendly tourism as alternative tourism (Raharjana, 2012).

The development of natural asset in Yogyakarta as a sustainable ecotourism program can be supported ecologically as well as economically feasible, also
ethically and socially just for the community. This means that sustainable tourism development is an integrated and organized effort to develop quality of life by regulating the supply, development, utilization, and maintenance of resources in a sustainable manner (Haryanto & Bambang, 2012). This is done to be able to improve aspects of tourism services and at the same time be able to realize the empowerment of local communities or the central role of the community in a variety of sustainable tourism development activities in accordance with the expectations and abilities of the community itself. It can be concluded that some of the authors mentioned substantively suggest that the term community-based ecotourism efforts should be used to differentiate environmentally sensitive initiatives, but which also aims to ensure that the active role of local community members has a high level of quality control over the activities that occur, and a significant proportion of benefits can be obtained significantly.

**River Basin Development Model**

Abdullah and Astuti (2007); Yoeti and Suarthana (2008) state the definition of ecotourism as outlined by the Green Tourism Association is the development of tourism which has four pillars or four attributes, namely:

1. Environmental responsibility which implies protection, conservation or expansion of natural resources and the physical environment to ensure long-term life, and the sustainability of ecosystems such as Ujung Kulon nature tourism which results in a sustainable ecosystem concept from horny rhinoceros.
2. Local economic vitality encourages the growth of the local economy, the business community to ensure sustainable economic strength (sustainability), for example the impact of tourism development which is followed by the rampant local economic activity.
3. Cultural sensitivity encourages respect and appreciation for customs and cultural diversity, to ensure the continuity of good local culture, for example through cultural tourism. People familiar with regional cultures or cultures of other countries give rise to respect for these cultural treasures.
4. Experiential richness that is creating attractions that can enrich and enhance experiences that are more satisfying, through active participation in understanding personal attitudes, human involvement with nature, the environment and culture.

Fandeli and Chafid (2000) (Australian Department of Tourism) states that ecotourism based on nature includes aspects of education and its interpretation of the natural environment, as well as the culture of the community with its ecological sustainability management. This definition affirms that not only in business-related aspects as well as other forms of tourism, but it is closer to special interest tourism, alternative tourism or special interest tourism with its natural attractions. While
the development of tourism in Yogyakarta has implications for the problem of city traffic which is starting to freeze, due to the burden of transportation infrastructure that is no longer available with an increase in the number of road users. This phenomenon has not yet led to the idea of alternative uses of river areas as river transportation land. The problem of urban monorails built on rivers, sustainable ecotourism programs that are influenced by several factors, including: the form of settlements, the diversity of land uses, the density of buildings and population, and accessibility, structure of the city is monocentric. Grid-shaped road network, an integrated area built from high traffic density through the land use of the river as an attractive and adequate environmental area as a cultured urban ecotourism (Rimadewi & Supriharjo, 2009).

**Fig 5. Research Analysis**
(Source: Data Analysis, 2019)

Gap analysis of the empirical phenomena from the above research that the management and use of rivers as ecotourism requires the active role of the local community, the role of the penta helix, government support and the commitment of the executor in developing smart city commitments from
the environmental aspects of the Code River environment which are still concerning. The role of multi-media ICT networks that can provide positive implications for the existence of a clean and cultured city of Yogyakarta in accordance with the demands of global climate change in global tourism. The government of Yogyakarta DIY could find the results gab of research from other cities and regions in Indonesia which were successfully developed initially were slums turned into an elite and attractive area. River areas in other areas such as: Kalilo River in Banyuwangi City, Tukad River in Denpasar Bali, Cikapundung River in Bandung, Anke River in Jakarta, Pepe River in Solo, Chaophraya River in Bangkok, Serawak River in Kuching, Chenggyecheon River in Seoul Korea, Dotonbori River in Osaka Japan all of them were originally unorganized to begin with can be turned into tourism icons, finally those were able become a tourist attraction. Now able to provide benefits for the welfare of people's lives. The river has value as an expensive city asset that is not widely understood by the local community and policy makers. The development of ecotourism areas can be successful from its main factors in addition to active community participation as well as government support for accumulated policies and adequate funding.

CONCLUSION

From some of the research problems that have been outlined above it can be concluded that from the aspect of research problems can be described as follows:

The first, changes in the world tourism climate in the era of globalization and digital dam technology has been able to change the order of tourism development that demands the commodification of natural and human aspects to create change in line with the demands of industry 4.0 which demands that the tourism community develop faster more innovative and creative. An understanding of the benefits of rivers and community concern for and cleanliness of the KaliCode river area are still not fully understood while the existence of the potential of Yogyakarta City as a tourist destination famous for its cultural imagery, the Yogya community, has not been able to become an example for other cities in Indonesia. The real condition of the dirty and dirty Kali Code area in several riverbanks shows a low awareness of the citizens of the Code river community and the awareness of how important the Code River is to the development of Yogyakarta ecotourism. Slogans of the appeal for river cleanliness that have been extended along the riverbank are considered as decoration. Some community residents' activities turned out to still be dumping waste into rivers. There is waste in the form of plastic, logged crops, wood, bamboo, paper, plastic bottles, cloth, etc. Plants that live on the banks of the river, water hyacinth, grass plants, vines, there are moss that are also left to make the river look dirty.

The role of the government in the development of river use as ecotourism is not yet fully programmed, so that the people of the Kali Code area are disappointed, apathetic and less
participatory with the prokasih program. It needs government openness, moral support and the application of tangible assistance to river management, cooperation with the pentahelix community of Yogyakarta.

**RECOMMENDATION**

Climate change, the development of world tourism must be addressed properly, innovation in the management of tourist destinations in accordance with the demands of the rapidly changing tourist climate. The role and responsibility of the people and the government of Yogyakarta in managing a clean and cultured city environment, specifically the use and empowerment of the Kali Code area as ecotourism should not only be as a discourse. Following up on socialization in FGD meetings and program planning that is clearly structured, involving as much as possible the role of the local community. Mass services that are routinely programmed routinely involve elements of ABRI, pentahelix especially the local community in applying the smart city ecotourism program.

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