



University of Jember
Faculty of Teacher Training and Education



PROCEEDINGS

3rd ICEGE 2020

The Third International Conference on Environmental Geography
and Geography Education

September 12th - 13th, 2020

at Faculty of Teacher Training and Education, University of Jember

PAPER • OPEN ACCESS

Preface

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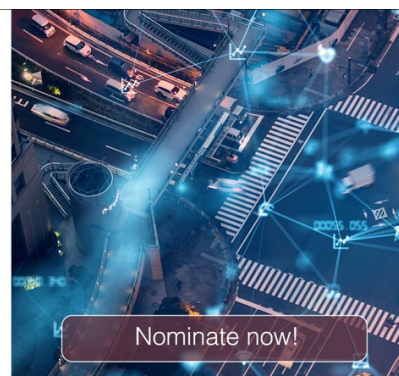


The Electrochemical Society
Advancing solid state & electrochemical science & technology

The ECS is seeking candidates to serve as the
Founding Editor-in-Chief (EIC) of ECS Sensors Plus,
a journal in the process of being launched in 2021

The goal of ECS Sensors Plus, as a one-stop shop journal for sensors, is to advance the fundamental science and understanding of sensors and detection technologies for efficient monitoring and control of industrial processes and the environment, and improving quality of life and human health.

Nomination submission begins: May 18, 2021



The Third International Conference on Environmental Geography and Geography Education (ICEGE) 2020

Sumardi

Editor in Chief of International Conference on Environmental Geography and Geography Education 2020

E-mail: sumardi.fkip@unej.ac.id

We would like to express our gratitude to all participants joining “The International Conference on Environmental Geography and Geography Education” (ICEGE). The 3rd International conference held by the Department of Social Science Education held by FKIP-University of Jember on 12-13 September 2020. The participants of this ICEGE 2020 are research students, academicians and researchers, scholars, scientist, teachers and practitioners from many countries.

Due to Covid-19, this conference was held in dual-mode, namely online and face to face. For those invited speakers from abroad who have travel restrictions presented their research topics through zoom cloud meeting. Likewise, participants who stay outside Jember city joined the conference virtually. Meanwhile, participants from within Jember city joined conference in person by complying the Covid-19 protocol.

Two hundred forty-eight participants attended this conference. The number of submitted papers were 219 and papers sent to the reviewers were 198. Two reviewers reviewed one paper. Each reviewer reviewed maximum 8 papers. Based on reviewer recommendations, finally the number of accepted papers is 130. Thus, the acceptance rate is 59,4 %.

In the plenary season, each invited speaker presented their presentations for 1 hour and 15 minutes for Q/A session. In the parallel session, each participant made the presentation for maximum 15 minutes and 5 minutes for Q/A session. The technology used in the parallel session is zoom cloud meeting with 13 breakout rooms.

This conference becomes a dissemination forum for scientists working on theoretical and empirical research of environmental geography, transportation geography, geography education, social science and its application. This conference's mission is to become an annual international forum in the future, where civil society organization and representative research students, academics and researchers, scholars, scientists, teachers, and practitioners from all over the world could meet and exchange an idea to share and discuss about research. The aim of the second conference is to present and discuss the latest research that contributes to the new ontological, epistemological and axiological knowledge and



to a better understanding in the area as follows:(1) Environmental Geography; (2) Geography Information System and Remote Sensing; (3) Geomorphology; (4) Natural Disaster; (5) Economics; (6) History; (7) Education; (8) Humanities; (9) Social Sciences and (10) Global Science and Studies.

On behalf of the organizing committee, finally we gratefully acknowledge the support from the FKIP-University of Jember of this conference. We would also like to extend our thanks to all lovely participants who have been joining this unforgettable and valuable event.

Assoc. Prof. Dr. Sumardi, M.Hum



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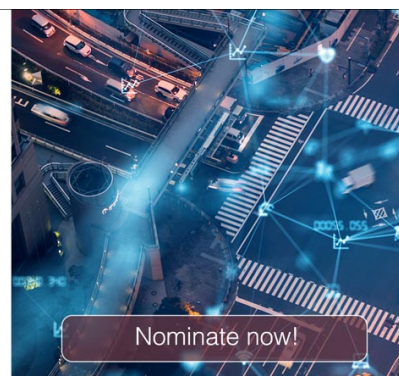
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Advancing solid state & electrochemical science & technology

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Nomination submission begins: May 18, 2021



Nominate now!

Peer review statement

All papers published in this volume of IOP Conference Series: Earth and Environmental Science have been peer reviewed through processes administered by the Editors. Reviews were conducted by expert referees to the professional and scientific standards expected of a proceedings journal published by IOP Publishing.

- **Type of peer review:** Double-blind review. The authors and the reviewers do not know each other. The managing editor send the papers to the reviewers by hiding the authors' name and their affiliation.
- **Describe criteria used by Reviewers when accepting/declining papers. Was there the opportunity to resubmit articles after revisions?** There were 13 aspects of assessment for accepting/declining papers, i.e. Clarity of abstract, Significance of research, Sufficiency state of the art, Contribution to the field (novelty), Research objective, Appropriateness of the research method, Relevance and clarity of drawings, graphs and tables, Experimental/evidential support, Quality of data or findings, Discussion and conclusions, Direction for future research and recommendations, Clarity of English, Writing style (according to EES format). There are no opportunities to resubmit papers after rejection. For the revised papers regarding to reviewer comments, they should resubmit their papers.
- **Conference submission management system:**
<https://easychair.org/conferences/?conf=icege2020>
- **Number of submissions received:** 219
- **Number of submissions sent for review:** 198
- **Number of submissions accepted:** 130
- **Acceptance Rate (Number of Submissions Accepted / Number of Submissions Received X 100):** 59,4 %
- **Average number of reviewers per paper:** 2
- **Total number of reviewers involved:** 50
- **Any additional info on review process (ie. plagiarism check system):** We used TURNITIN software to check the plagiarism issue during the review process.



- **Contact person for queries:**
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3rd International Conference on Environmental Geography and Geography Education, 12 September 2020, East Java, Indonesia

Accepted papers received: 12 April 2021

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Coastal Community Resilience Planning Toward Disaster: A Case Study on Coastal Area in Malang Regency, East Java, Indonesia

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Landslides susceptibility mapping based on geospatial data and geomorphic attributes (a case study: Pacet, Mojokerto, East Java)

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Quintuple helix model for tourism development in Banyuwangi regency

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Abstract. In order to increase the competitiveness of the Banyuwangi Regency, which is then carried out for the development and dissemination of an effective tourism economic model for the Banyuwangi Regency, this research has been carried out to find an ideal strategy for collaboration in the development of the tourism economy. The research method used in this research is descriptive qualitative. Data were collected by observation (observation), qualitative interviews, and qualitative documents. The data analysis technique uses an interactive model of analysis as developed by Miles and Huberman (1992). Through qualitative descriptive research, researchers can freely obtain data and facts until they reach a saturation point so that the data obtained is able to answer the questions of this research problem. The use of this method is expected to provide a more in-depth and comprehensive picture of the reality and the process to be studied. The findings of this study show that the Quintuple Helix Model gives the natural environment of society an effective place to attract further interest. In fact, it should ideally be viewed as a driver for knowledge production and innovation.

1. Introduction

The involvement of various sectors and components of society is important to provide good collaboration in developing the tourism sector. The involvement of local communities who actively participate in tourism development will be a special bargaining value for tourism in Indonesia. The community by participating is an active role in improving the economy of their area through tourism. Indonesia won the Best of Show-Cultural Display at the LATAS (LA Travel & Adventure Show) in February 2018. CMT China The Holiday Exhibition awarded the title Best Showcase Exhibitor Award. The titles won in this exhibition are one of the tools to introduce Indonesia's wealth in the eyes of the international community (Gregorius, 2018). It is hoped that the number of tourism awards that have been won can motivate the community and government to jointly develop and protect the tourism that Indonesia already has. Both from the aspect of natural tourism, related sectors such as accommodation and transportation, human empowerment, and community creation, can be a capital to raise the image of Indonesian tourism.

Over the last five years (2014-2018), the average growth of international tourist arrivals (tourists) to Indonesia reached 14 percent per year. This figure is higher than the average growth of 9 percent per year in international tourist visits over the 2009-2013 period. Global tourist visits in 2009 were reported at 6.32 million people, according to data from the Central Statistics Agency (BPS). At the end of 2013, this number will continue to rise to 8.8 million people. Compared to 2009, the number of international tourists visiting Indonesia reached 15.81 million people in 2018, or increased by around 2.5 times. In 2019 the government targets foreign tourist visits to reach 18 million people. In 2019, foreign tourists visiting Indonesia reached 1.9% from the previous year, reaching 16.1 million people. This number does not meet the previously set target of 18 million people.

Stable economic growth, relatively controlled politics and security, rich natural resources, and a strong investment climate have increased the number of the middle-class population in Indonesia. The



increase in the middle-class population has brought a wave of consumer spending in the form of property ownership/investment, the need for financial services / consulting, and education (Rastogi, et al, 2013). The economic growth of tourism, especially in East Java, must be utilized optimally to achieve regional prosperity and supported by an ideal and optimal tourism economic development model. The tourism economy in East Java is illustrated by the room occupancy rate (TPK) of star hotels in East Java in the first quarter of 2016 which reached 56.07% higher than the same period in the previous year, namely 53.09%. The growth of foreign tourist arrivals to Indonesia through Juanda Airport reached 6.66% with tourists mainly from Malaysia (23.04%) and Singapore (10.53%) [1].

Law Number 22 of 1999 on Regional Government gives freedom and authority to regions to regulate and make maximum use of their resources to generate revenue for the areas and introduce the potential that the regions have. Banyuwangi Regency has a diverse landscape, starting from the highlands in the form of the mountainous areas, lowlands, and coastlines that stretch along 175.8 km. Its diversity makes Banyuwangi rich in tourism potentials such as beaches, mountains, forests, national parks, culture. Based on the variety of tourism assets that are more dominant in the Banyuwangi Regency, namely natural tourism, the priority tourism development is nature tourism or tourism with environmental and cultural insight. The existence of potential natural resources and cultural diversity that Banyuwangi has can make tourism development easier [2].

The growth of the tourism sector in the Banyuwangi Regency over the last five years has tended to increase, meaning that one day its growth can improve, but at other times it will decline even though it is not overly own. The existence of development in the tourism sector indicates that the industry has the same competitiveness and is even superior to the reference region; in this case, the Province of East Java [3]. An increase followed the increase in the gross regional domestic product of the Banyuwangi tourism sector in the contribution and growth of the Banyuwangi tourism sector. The gift of the tourism sector in the Banyuwangi Regency is in second place after the assistance of the agricultural industry. The development of the trade, hotel, and restaurant sub-sector has increased from year to year since the tourism sector has become a leading sector developed by the Banyuwangi Regency in the context of regional development.

The pattern of cooperation and collaboration between academics, firms, government, and society is now increasingly dynamic. Even within the scope of this collaboration, there have been quite fundamental changes. In the past, the public sector (government) could play a more dominant role than other actors. The government can play policies according to the will and authority they have. As scientific development progressed, the old conceptions began to collapse, and a new concept of the need for equality in playing a role emerged. Academics, firms, government, and society together and in the same portion can develop a collaborative project with the main principle of equality in tourism development.

Collaboration between helix on the quintuple helix component has been built in the tourism development of the Banyuwangi Regency. The partnership between helix has been going quite well. Still, it cannot escape criticism, apart from the objections that we need to address to academics and the private sector with minimal participation. There is one more criticism that needs to be addressed immediately, namely positioning the natural environment of the surrounding community as one of the key actors that is no less important. The Quintuple Helix model explains the importance of development around us to be dominated by economic, political, and community interests. The Quintuple Helix model does emphasize a socio-ecological transition that societies and economies need. Quintuple helix tends to be more sensitive to ecological issues, so this model is appropriate for the tourism development of the Banyuwangi Regency.

The Quintuple Helix stresses the necessary socioecological transition of society and economy in the twenty-first century; therefore, the Quintuple Helix is ecologically sensitive [4]. The natural environments of society and of the economy can also be seen as drivers of knowledge creation and innovation within the context of the Quintuple Helix innovation model, thereby identifying opportunities for the economy. 'The Quintuple Helix Model is interdisciplinary and transdisciplinary at the same time: the complexity of the five-helix structure implies that a full analytical understanding of all helices

requires the continuous involvement of the whole disciplinary spectrum, ranging from the natural sciences (because of the natural environment) to the social sciences and humanities (because of society, democracy and the economy)' [5].

The Quintuple Helix model not only provides the necessity for healthy interaction and collaboration but also requires collective interaction and knowledge exchange through the five subsystems. The Education System, which defines itself, refers to the university as a producer of knowledge. Helix requires "human capital," such as teachers, scientists, researchers. The economic system, consists of an industry or the private sector. This Helix concentrates on the area of "economic capital," for example, entrepreneurship, technology, products, and others. The natural environment, as the third subsystem, is very decisive (determinant) for ensuring sustainable development and providing people with "natural capital." Examples can be such as resources, variety of animals, plants, and others. Media and culture-based society, the public can integrate and combine the two forms of capital. Communities that already have a strong culture (traditions and values) can have social capital. They need to connect other strengths they already have in the form of a helix of public based media (the internet and newspapers), which we might call information capital. The political system can formulate decisions where the state or government has "political and legal capital." [6].

2. Methods

The method in this study uses a qualitative descriptive method. This study aims to identify potential tourism to be developed based on the economy, analyze and formulate a tourism economic development model in Banyuwangi Regency. Data were collected by observation, qualitative interviews and qualitative documents. The data analysis technique uses an Interactive Model of Analysis.

Table 1 Research Focus Matrix

Research Topic	Research Focus	Research Aspects
Quintuple Helix Model For Tourism Development	Economic	Destination Life Cycle Prosperity Employment Well-being
	Civil Society	Empowerment Justice Purity
	Natural Environment	Efficiency Diversity Integrity
	Culture	Diversity

Source: UNWTO-EP, 2005

3. Results and Discussion

3.1. Quintuple Helix Model

The Quintuple Helix's purpose and interest is to include the natural world as a new subsystem for models of knowledge and innovation, so that 'nature' is defined as a central and equivalent component of and for the development and innovation of knowledge. The natural environment is part of the knowledge-building process, and the development of new invention is especially important because it helps to sustain, thrive and vitalize civilization and make new green technology possible, and humanity can learn

more from nature, after all (especially in times of climate change). With the Helix of Natural Environment, ‘sustainable development’ and ‘social ecology’ become constituents for social (societal) innovation and knowledge production [5]. Via the news in local newspapers and TV, we also see cultural and environmental tragedies. The development of the tourism sector in various parts of the world has impacted numerous dimensions of human life, not only affecting the socio-economic size but also touching the socio-cultural dimension and even the physical environment. The impact on these various dimensions is not only flattering but also harmful.

Attention that in the effort to develop tourism, besides having a positive impact on the community around the object, harms the surrounding community. Efforts to develop tourist objects need to consider the negative effects that arise for the preservation of these tourist objects and the preservation of environmental functions around the tourist areas. The implementation of tourism development oriented towards improving the welfare of the community has an impact on the surrounding environment, both directly and indirectly, both in the short and long term.

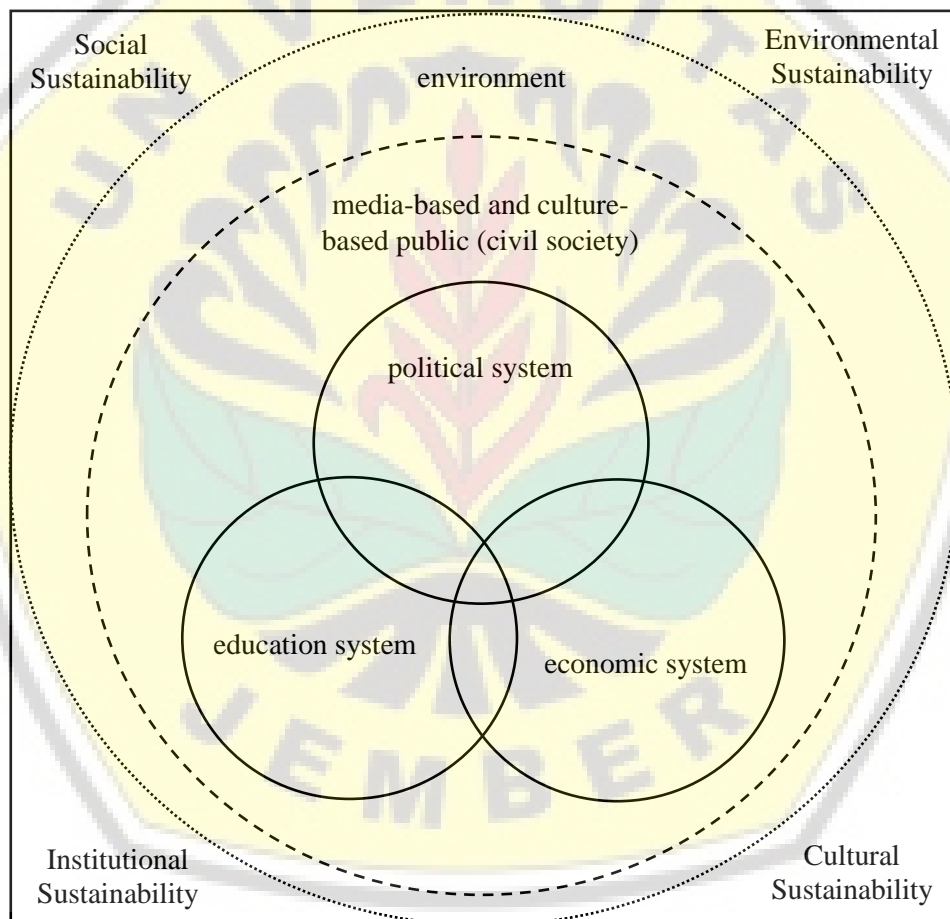


Figure 1. The subsystems of the Quintuple Helix model. Modified from Carayannis and Campbell (2010) and Hasan and Hemawan (2018)

The economic development of tourism will harness the potential of local human and physical capital in order to generate new opportunities and increase local economic activity. collective and selective processes to create better conditions for tourism economic growth and job creation. development of a tourism economy capable of adapting to increasingly competitive market changes [7].

In 2019, there is a new field, namely the creative economy, which handles all kinds of MSME development products and videos. This new field still has limitations, namely that the personnel

composition does not yet exist but the housing and organizational platform do exist. This is part of the full involvement and support by the local government of the Banyuwangi Regency in tourism development. The policy in the development of the creative economy was not taken unilaterally by the tourism office, the policy was taken based on a Regent Regulation. Every field and SKPD always share how to improve human resources (Pokdarwis, art actors, creative videos). The activities carried out can be in the form of training and coaching in the development and promotion of managed tourist destinations.

Another form of support from the tourism office, the Banyuwangi Regency Tourism Office has a budget that comes from the APBD specifically budgeted for tourism management and development as well as improving human resources. Another form of support apart from local government is also through the central government. Kemenpar assists in the form of pieces of training to improve the human resources of tourism actors in Banyuwangi, as recently as the dive guide.

The Banyuwangi tourism office always follows technological developments with promotion through social media in collaboration with several artists and influencers, during a pandemic, the tourism office also makes applications for booking tourist tickets in Banyuwangi, considering that with the presence of Covid, the quota capacity in tourist destinations must be limited. Local government assets are Grand Watudodol and Mustika Beach, which include Pokdarwis, community-based investors who carry out regular training every one month.

The tourism office has a system to control the number of tourists in each tourist destination and hotel, from the Head of the Tourism Office himself evaluates every Monday to see the development of tourists who are present, strategies to maintain prices as well as hotel rates by holding attractions that attract tourists

3.2. *Public Policy for Institutional Sustainability and Cultural Sustainability*

Implement policies implemented by Banyuwangi Regency that the policies implemented are regional and national tourism development strategies. The system of Banyuwangi Regency is an implementation of local autonomy to develop tourism in the region. Tourism development in Banyuwangi Regency is under the Banyuwangi Regency Regional Regulation Number 13 of 2012 concerning the Master Plan of Banyuwangi Tourism Development. The regional regulations refer to Law Number 10 of 2009 concerning Tourism. Banyuwangi Regency is obliged to carry out a systematic, planned, integrated, sustainable, and responsible tourism development while still protecting religious, social, and cultural values that live in the community and environmental sustainability.

The implementation of tourism development policies through the Festival in Banyuwangi Regency, the transmission process is divided into transmission between the bureaucratic leader (policy-maker), the leading implementing organization, and the supporting implementing organization (internal bureaucracy as the policy implementor). subsequent transmission of transmission between the implementing organization/bureaucracy and stakeholders (public).

The budget from the Banyuwangi government provides intervention from the tourism sector in the form of facilities or infrastructure. The tourism office opens access and infrastructure to attract tourists and provide easy access to destinations. Local governments can enter into various sectors so that all tourism sector actors feel they are being noticed by the government. If it is like that, then the government will easily enter from various sectors of tourism actors (hotels, karaoke, restaurants, MSMEs) to continue to monitor and make it easier to solve the problems that are complained of with the tourism sector actors.

Collaboration from the government, private sector, and society will build good cooperation in developing tourism in an area. Even in Banyuwangi Regency, displays regional art attractions to attract tourists to visit. The various attractions that are presented aim to be felt by tourists to be more interested and finally see and then pay for the tickets, in the ticket, there is also a tax, an entry tax to the Regional Original Income, In this case, the collaboration of various tourist destination actors will drive tourism in Banyuwangi.

The impact of covid-19 on the tourism sector made a drastic decline. One of the government's efforts to overcome this problem is by providing basic foodstuffs to the affected tourism businesses. Even though the hotel was closed, the solution for hotel employees was at home. With this the role of the government must be present to help with the form of basic food and for it to be given a pre-employment card. The number of hotels in Banyuwangi still survive because many from other districts or cities have comparative studies to Banyuwangi, thus increasing the number of hotel visits during the pandemic. Even the Banyuwangi government made activities for certification of diver guides.

4. Conclusions

The Quintuple Helix model places a significant position on people's natural environment to gain more attention. In fact, it should ideally be viewed as a driver for creation and innovation of knowledge. The Quintuple Helix model not only presents the necessity of healthy interaction and collaboration, but also calls for collective interaction and knowledge exchange through cultural systems, political systems, economic systems, media and culture-based societies, and the natural environment. A tourism development model that relates it to the context of the tourism planning or management process, by revealing the four components that form the tourism system, namely market, marketing, destination, and travel

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