GEOPARK LUMPUR INVESTMENT DEVELOPMENT SIDOARJO EAST JAVA INDONESIA

by Totok Wahyu Abadi

Submission date: 11-May-2021 11:18AM (UTC+0700)
Submission ID: 1583320343
File name: k-lumpur-investment-development-sidoarjo-east-java-indonesia.pdf (320.92K)
Word count: 3154
Character count: 18478

GEOPARK LUMPUR INVESTMENT DEVELOPMENT SIDOARJO EAST JAVA INDONESIA

Ahmad Riyadh Umar Balahmar, University of Muhammadiyah Sidoarjo
Eni Rustianingsih, University of Muhammadiyah Sidoarjo
Ilmi Usrotin Choiriyah, University of Muhammadiyah Sidoarjo
Hendra Sukmana, University of Muhammadiyah Sidoarjo
Totok Wahyu Abadi, University of Muhammadiyah Sidoarjo

ABSTRACT

Tourism is one of the most promising sectors for regional development on a global scale. Along with its development, the concept of community-based ecotourism has emerged, namely tourism that offers all available natural resources. This study was conducted in the mudflow in Sidoarjo to become an opportunity for the government to develop an existing tourism area. This study is a study of FGDs and academic texts of the Sidoarjo Regency Government in preparing the Sidoarjo Geological Protected Area Post-Porong Mudflow Master Plan Document. The results of the study showed that the development of mudflow tourism can become a major tourist destination supported by geo park galleries, rest areas, sports, education, culinary and souvenirs, urban forests, water storage pools, and urban farming. To realize this tourist destination model, Sidoarjo Regency must provide physical and non-physical infrastructure, socialization to the community about the safety level of Sidoarjo mud, socialization to the community or association regarding the benefits of the Sidoarjo mud area, and digging the community's spirituality to build together as a reference to accelerate the development of ecotourism.

Keywords: Development, Geopark, Lapindo Mudflow, Sidoarjo.

INTRODUCTION

Based on Law Number 10 of 2009 concerning Tourism, it is stated that the purpose of tourism is to increase economic growth; improve people's welfare; eradicating poverty; overcoming unemployment; conserving nature, environment and resources; promote culture; raise the image of the nation; cultivate a love of the country; strengthening national identity and unity; and strengthen friendship between nations. In order to achieve this goal, the Regional Government can encourage domestic investment and foreign investment in the tourism sector in accordance with the district tourism development plan, and the Government together with tourism-related institutions carry out tourism research and development to support tourism development. Tourism development can be realized through the implementation of a tourism development plan by taking into account the diversity, uniqueness and uniqueness of culture and nature, as well as human needs for tourism.

In this case, Sidoarjo Regency has hot mudflows that have gushed from 2016 to the present with a mudflow that has spread up to 650 hectares. Sidoarjo Regency Regional Regulation No. 6/2009 concerning the 2009–2029 Sidoarjo Regency Spatial Planning stipulates that the mudflow disaster area is designated as a geological protected area. The definition of

protection in the said area is more directed at the aspect of prudence geologically in the use of the area, where the provisions, management boundaries, and utilization of the area need to be formulated first through a more technical study. Based on the Academic Manuscript of Sidoarjo Regency Regional Regulation Number 6 of 2009 concerning the Spatial Plan of Sidoarjo Regency for 2009-2029, the Sidoarjo mud disaster area is divided into three typologies, namely:

1. Mud Disaster Zone, namely the area at a radius of 0-1.5 km from the center of the mud.
2. Mud Disaster Prone Zone, namely the area in a radius of 1.5-3 km from the center of the mud.
3. Mud Disaster Influence Zone, namely the area at a radius of 3-5 km from the center of the mud.

In 2016 Sidoarjo Regency Government conducted a Master Plan Document for Spatial Planning for the Post-Porong Mudflow Protected Area of Sidoarjo, by developing mudflow tourism as a major tourist destination supported by geo park galleries, rest areas, sports, education, culinary and souvenirs, urban forests, water reservoirs, and urban farming. Development of the Sidoarjo Mudflow Geological Protected Area as a tourist destination is supported by the provision of physical and non-physical infrastructure, socialization to the community about the safety level of the Sidoarjo mud, socialization to the community or association regarding the benefits of the Sidoarjo mud area, and digging up the community's spirituality to build with the Sidoarjo Regency Government.

On the other hand, the development of the area as a tourist destination needs to make various efforts to overcome problems that hinder its development, including floods that inundated Jalan Raya Porong, a flooded railway line, the ability of Ketapang River to drain puddles of water into Porong River, and building construction that don't cause distraction. The development of the Geological Protected Area in Sidoarjo covers the Mud Disaster Prone Zone as well as the Tlocor Pier and LUSI Island spots, its integration with the small industrial area of Tanggulangin bags and suitcases, the cultural heritage area of Candi Pari and Candi Sumur Porong.

In order to implement this idea, to realize the Sidoarjo Mudflow Geological Protected Area as a geo-tourism destination, in 2018 Sidoarjo Regency Government conducted the Sidoarjo Mudflow Roadmap Document Preparation into a Geopark which is used as a basis for carrying out the development of geo-tourism areas and their surroundings, along with their management. The focus of this roadmap is directed at the preparation of work programs for the next 10 years.

Therefore, as mandated by Law Number 12 of 2011 concerning the Formation of Legislative Regulations states that in the process of forming Regional Regulations, the conception of substance includes regulated material, linkages with other regulations must be reviewed and harmonized as outlined in an Academic Paper. Academic papers are needed in the framework of the formation of laws and regulations aimed at statutory regulations produced in accordance with the national legal system and community life. It is also expected that the resulting laws and regulations will not face problems (for example requests for judicial reviews).

Based on the foregoing, it is necessary to study the Determination of Priority Locations for the Acceleration of Investment in Strategic Geo-tourism Areas in the areas affected by the Sidoarjo Mudflow as part of the process of resolving the legality aspects of the Geological Protected Area Spatial Planning Document for the Sidoarjo Mudflow Protected Area and the Roadmap for the Geological Protected Area Work Program Sidoarjo mud becomes a Geopark, therefore it can be further implemented in statutory regulations.

METHODOLOGY

Preparation of Academic Paper for Determination of Priority Locations for the Acceleration of Investment in Strategic Geo-tourism Areas in the Affected Areas of Sidoarjo Mud is carried out through literature or literature studies by examining various secondary data such as related laws and regulations, both at the statutory level and implementing regulations and various related legal documents. .

To complement the literature and literature study, discussions and interviews were also carried out as well as concept testing activities with various interested parties or stakeholders regarding the determination of priority locations for geo-tourism strategic areas. Data obtained from interviews and expert input, as well as data obtained from field data collection, which was then processed and formulated in Academic Paper format.

FINDINGS AND DISCUSSION

Sidoarjo Mudflow Area is also prospective to be developed, organized and managed as a special interest tourism area, particularly the geotourism area. This area is located in parts of Porong Subdistrict, Jabon Subdistrict, and Tanggulangin Subistrict which are currently used as tourist attractions with several supporting spots, namely the Sidoarjo Mud statue monument spot, building debris spot, mudflow center spot, and BPLS basecamp spot (as a rest area). Tourists who visit this tourist area are generally people who come from outside the area, both local and foreign, with the aim of only wanting to see the condition of the Sidoarjo Mud overflow area. In addition, there are also tourists who are victims of Sidoarjo Mud, with the only purpose of reminiscing about their former residences.

Based on the Vision and Mission for the Development of Strategic Geo-tourism Areas, the concept of developing the Strategic Geo-tourism Areas is as followsd.

1. Determine zoning of the planning area according to the RT/RW of Sidoarjo Regency 2009-2029, namely Mud Disaster Zone, Mud Disaster Prone Zone, and Mud Hazard Influence Zone. For the development of the Geo-tourism Strategic Area, it is called the Geo-tourism Destination Zone, the Geo-tourism Destination Support Zone and the Geo-tourism Destination Buffer Zone.
2. Mud Disaster Zone (Geo-tourism Destination Zone)
    a. Establish a Mud Disaster Zone (Geo-tourism Destination Zone) as a geological protected area and utilize it for a geopark.
    b. Utilizing the Mud Disaster Zone that is inside the embankment (Mud Tourism Core Sub Zone) for geological tourism activities (geopark) which consider the carrying capacity of the environment by means of:
    - limiting the number of tourists who enter the mud pool area.
    - limiting tourist activities in the mud pool area.
    - limiting the luggage of tourists in the mud pool area.
    - obliging tourists who enter the mud pool area to use safety equipment from gas bursts, ground cracks, subsidence.
    - Planning a Mud Disaster Zone that is outside the embankment (Mud Tourism Support Sub Zone) for the conservation area to support mud tourism.
    - Minimizing the load on the movement of vehicle traffic over the embankment and Jl. Raya Porong.

3. Mud Disaster Prone Zone (Support Zone for Geo-tourism Destinations)
    a. Planning a Mud Disaster Prone Zone (Zone Supporting Geotourism Destinations) as a geopark supporting cultivation area that is in harmony with the surrounding environment. In this zone it is permitted to develop buildings, facilities and infrastructure to support Geotourism, including accommodation facilities, restaurants, tourism information and services, tourism information centers, e-tourism kiosks, tourism police and tourism task forces, souvenir shops. shop), a gallery where geological objects are displayed in the Sidoarjo mudflow area, the Geological Research Institute, ponds and agricultural land for experiments, as well as green belts.
    b. Developing tourist attractions periodically and continuously, this is so that tourists are attracted to come.
    c. Maintaining the Mud Disaster Prone Zone (Zone Supporting Geo-tourism Destinations) for cultivation areas characterized by rural areas along with supporting facilities, including security facilities such as fire extinguishers, disaster response facilities (early warning system) in disaster-prone destinations; financial and banking facilities such as Automated Teller Machines and money changers; business facilities, such as 24 (twenty four) hour grocery and drug stalls (drug stores), internet cafes, public telephones, public lockers; health facilities in the form of a 24 (twenty four) hour polyclinic and first aid facilities; sanitation and hygiene facilities such as public toilets, laundry services, and trash bins; special facilities for people with physical disabilities, children and the elderly; recreational facilities such as rest areas, children's play facilities, sports facilities and pedestrian facilities; parking space facilities; and worship facilities.
4. Mud Disaster Influence Zone (Geotourism Destination Buffer Zone)
    a. Developing the Mud Disaster Influence Zone (Geo-tourism Destination Buffer Zone) as a buffer zone for the Mud Danger Zone, namely:
        - Provide a place for safe relocation for cultivation activities, especially economic-socio-cultural activities that are moved from the Mud Disaster Zone.
        - Developing the Sidoarjo Mud Area (Geopark) linkage which is integrated with the Kali Porong (Jabon Longstream) - Tlocor Pier - LUSI Island.
        - Providing facilities (pier, rest area) and infrastructure (transportation) connecting the Geopark - Kali Porong channel (Jabon Longstream) - Tlocor Pier - LUSI Island.
        - Developing tourist attractions periodically and continuously so that tourists are attracted to come.
    b. Maintaining the Mud Disaster Influence Zone (Geo-tourism Destination Buffer Zone) for cultivation areas that are rural in character.
    c. Providing infrastructure to develop Geo-tourism.
    d. Integrating the Development of Mud Disaster Zone - Mud Disaster Prone Zone - Mud Hazard Influence Zone.

To find out the priorities and linkages between strategies based on their SWOT weighting, a combination of internal and external strategy interactions is carried out. In summary, the results of the IFAS - EFAS matrix formulation, based on the SO, ST, WO, and WT strategies, are weighted assessments to determine the priority scale. The arrangement of alternative strategies based on their priority order obtained from the weighting of the SWOT interaction matrix is presented in the following table:

Table 1
TO FIND OUT THE PRIORITIES AND LINKAGES BETWEEN STRATEGIES BASED ON THEIR SWOT WEIGHTING

Priority	Strategy	Value Weight
I	Strength-Opportunity	8,1
II	Weakness-Opportunity	7,7
III	Strength-Thread	7,0
IV	Weakness-Thread	6,6

The results of the IFAS-EFAS interaction which resulted in the strategic alternative that received the highest weight were Strength - Opportunity (SO), which can be translated as a strategy to use strength to take advantage of existing opportunities. This condition is favorable for the regional government of Porong Subdistrict, because in terms of internal factors, Porong Subdistrict has more strengths than weaknesses, while from the external factor, the opportunities are much better.

Multiplier effects are activities that can spur the emergence of other activities. Based on this theory, it can be explained that the activities of the trade and services sector will drive other sectors as their support. Empirical conditions showed that the priority for accelerating investment and regional development in the Porong sub-district is urgently needed. This is expected to be able to revive the Porong area and provide multiplier effects and contribute positively to improving the quality of life of the community both economically and socio-culture.

CONCLUSION

Tourism is an integral part of development carried out in a systematic, planned, integrated, sustainable and responsible manner while still providing protection for religious values, cultural values that live in society, sustainability, quality of the environment and the interests of the community. Tourism development is very much needed to encourage equal opportunity to do business and get benefits, and to face the challenges of changes in local, national and global life.

Then in order to support the acceleration of investment and regional development. The strategy formulation is obtained through a combination of the elements S, W, 0, and T, resulting in several strategy combinations, among others:

a. The regional government policy towards Porong Subdistrict which is an affected area in supporting investment growth points, namely by providing convenience in licensing and incentives for taxes and fees (BPHTB, PPH, IMB, PBB etc.) to attract investors to invest their capital.
b. The government policy in compiling strategic area spatial planning is expected to be able to attract investors in the context of equitable development and economic growth in the Porong Subdistrict area

Determining the priority scale for accelerated investment and regional development is in the context of reviving the Porong Subdistrict area as an affected area in developing its potential as a commitment to realizing the Geo-tourism Strategic Area. Based on the above conclusions, some suggestions can be made as follows: There needs to be a determination of authority in the Development of Strategic Geo-tourism Areas between the authorities of the central government and local governments. There needs to be a priority location determination for problem solving

and development in an effort to accelerate investment in the affected areas of Sidoarjo Mud as a Geo-tourism Strategic Area. There needs to be a determination of authority in the Development of Strategic Geotourism Areas between the authorities of the central government and local governments. There needs to be a determination of priority locations for problem handling and development in an effort to accelerate investment in the areas affected by Sidoarjo Mud as a Geo-tourism Strategic Area.

REFERENCES

Alam, S. (2007). Geophysical Studies of Porong Mud Volcano Extrusion, disampaikan pada. *International Geological Workshop on Sidoarjo Mud Volcano, Jakarta, Indonesia*.

Anonim. (2007), Final Report on Sidoarjo Mudflow Management. *Sidoarjo Mudflow National Team, Surabaya, Indonesia, 1*(17)

Anonim. (2007), *Porong Regional Environmental Geological Investigation Report, Sidoarjo Regency, East Java Province*, Geological Agency (Center for Geological Environment), Department of Energy and Resources Mineral, Bandung.

Anonim. (2007). Report of an Integrated Investigation in the Porong Mudflow Area, Sidoarjo, East Java, Badan Geologi (Pusat Lingkungan Geologi). *Departemen Energi dan Sumber Daya Mineral, Bandung*.

Awang, H.S. (2006). Petroleum geology of East Java Basin : a Dynamic Review. *Guest Lecture, Gadjah Mada University, Yogyakarta*.

Bates, R.L., & Jackson, J.A. (1987). Glossary of Geology. *3rd Edition, American Geological Institute, New York*.

Billing, M.P. (1986). Structural Geology. *Third Edition, Prentice-Hall of India Private Limited, New Delhi*.

Fertl, W.N. (1976). Abnormal Formation Pressure Implications to Exploration, Drilling, and Production Of Oil and Gas resources". *Elsevier, Scientific Publishing Compan Houston, Texas*.

Hasanudin., Abidin, Z., Kusuma, M.A., Setyadji, B., Andreas, H., Gamal, M., Prihadi, B. (2007). GPS-based Deformation Monitoring of Mud Volcano in Sidoarjo East Java, Geodesy Research Division and Applied Geology Research Division-ITB, disampaikan pada. *International Geological Workshop on Sidoarjo Mud Volcano, Jakarta, Indonesia*.

Hamilton, W. (1979). Tectonics of Indonesian Region. *US Geol. Surv. Prof. Paper1078,* 345.

Karnawati, D., Husein, S., Pramumijoyo, S., Ratdomopurbo, A., Watanabe, K., Anderson, R. (2007). Earthquake Microzonation and Hazards Maps on Bantul Area, Yogyakarta, Indonesia, The Yogyakarta Earthquake, 1-14.

Maa'rij, B.R. (2008). Identification of Fault Reactivation based on Surface and Subsurface Geological Data in the Sidoarjo Mudflow Area and Its Surroundings, Porong District, Sidoarjo Regency, East Java Province, *Final Project Thesis in the Department of Geological Engineering, Faculty of Engineering, Gadjah Mada University*.

Ongkosongo, O.S.R. (2008). Strategi Mengantisipasi Bencana Geologi. *Prosiding Seminar Nasional Kebumian 2008: Tantangan dan Strategi Pendidikan Geologi Dalam Pembangnan Nasional, UGM, Indonesia*

Rahardjo, W. (2004). Regional Geological Excursion Guide for the Southern Mountains and Kendeng. *Department of Geological Engineering, Faculty of Engineering, Gadjah Mada University, Yogyakarta*.

Rovicky. (2006). Hoarding (drowning) the location of the hot mudflow.

Satyana, A.H. (2007). Geological Disasters in "Sandhyâkâla" Jenggala and Majapahit: Hypothesis of Historical Mountain Mud Eruption Based on the Book of Pararaton, Serat Kanda, Babad Tanah Jawi; Timun Mas folklore; LUSI Eruption Analogy; and the Kendeng-Delta Brantas Geological Depression Analysis, Annual Convention and Exhibition. *The 36th IAGI, The 32nd HAGI, and the 29th IATMI, Bali*. 13-16.

Suliantara., Setiawan, H.L., Doma F.P., Maruyama, T., Deguchi, T., Kobayashi, C., Kawai, M. (2008). PALSAR Data for Monitoring of Earth Surface Deformation. *PPPTMGB LEMIGAS – ERSDAC, PERTEMUAN ILMIAH TAHUNAN IAGI ke 37, Bandung*.

Sunardi, E., Alam, S., Guntoro, A., Budiman, A., Hadi, S., Kusuma, M. A. (2007) Study of Geology and Geophysics of Mudflow in Porong Sidoarjo, East Java. *International Geological Workshop on Sidoarjo Mud Volcano, Jakarta, Indonesia*.

Van Bemmelen, R.W. (1949). The Geology of Indonesia. *Government Printing Office, The Hague, Amsterdam*.

Wibowo, H.T. (2007). Geological Dynamics in the Sidoarjo Mudflow Area and Its Surroundings. *Deputy of Operations-Sidoarjo Mud Management Implementing Agency, Surabaya*.

Wibowo, H.T. (2007). Geological Conditions of the Porong Region and Its Surroundings. *Deputy of Operations-Sidoarjo Mud Management Implementing Agency, Surabaya*.

Wibowo, H.T. (2008). Slide Presentation: Subsidence in Siring Barat Village, Implementing Agency-BPLS, Surabaya.

Widodo, A. (2008) Proposed Mapping of Risk Areas around Mud Embankments. *ITS, Surabaya*.

GEOPARK LUMPUR INVESTMENT DEVELOPMENT SIDOARJO EAST JAVA INDONESIA

ORIGINALITY REPORT

2%	0%	0%	2%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

MATCH ALL SOURCES (ONLY SELECTED SOURCE PRINTED)

2%

★ Submitted to Universitas 17 Agustus 1945 Semarang

Student Paper

Exclude quotes	On	Exclude matches	< 2%
Exclude bibliography	On		