Benchmark

Volume 5 Nomor 1 2024
ISSN (Online): 2774-7212
http://journal.febubhara-sby.org/benchmark

Local Community Participation Seasonal Flood Disaster in Sidoarjo Regency, East Java

***Idham & Dzulkifli Bin Mukhtar**
Universitas Alkhairat Palu, Indonesia

DOI: 10.46821/benchmark.v5i1.526

ABSTRACT

Irrigation in Sidoarjo Regency Drainage System Complex area of carrier channels to irrigation of the drainage (AFVOUR) in the display of water level regulators. High water surface in the channel causes slow flow of rain water catchment to a puddle. Conditions are exacerbated by backwater in the river channel in the area near the coast when the tide, causing floods to not be directly receding. Synergy has a combination of integration of various elements (for example, stakeholders) optimizing something better, legitimacy is considered to equalize perception hoping that actions are carried out in the desired action entity, appropriate according to value norms. Case Study Case data applies certain cases are generalized. Case study data is possible to be used to explore, examine comprehensiveness of a research object. Analysis of data using atlas, The weakness of the government's supervisor handles industrial waste into the River Peraul in Sidoarjo Regency, Urban Sprawl Social Impact Urbanization in big cities, controlling urbanization Increases development using the approach to touch the needs of the community needed Village, equity, spread of village remote development, the level of participation and understanding of the community provides feedback related to the concept of handling routine flood disasters every year. Seasonal flood disaster control in Sidoarjo Regency by involving local communities is an important approach by direct supervision by local communities, counseling on good water management practices, emergency response training, community based infrastructure development, coordinating between the government, local communities, form of concrete participation Local community in Sidoarjo Regency.

Keywords: Participation, Local Community, Seasonal Floods.

INTRODUCTION

Floods are natural events that occur resulting in disturbed activities human life, events are said to be one of the natural disasters, a series of natural events threatens and disrupt human activities or cause negative impacts for humans (Wang, 2020), flood Flood disasters, flood problems to still a problem for big cities in Indonesia, floods continue to increase both in urban and rural areas. Indonesia suffered losses and damage due to flooding of two -thirds of all natural disasters that occurred (Mimi, 2021).

Floods are seen as a disaster event if it has disrupted human activities to have a negative impact, causing conditions to threaten the safety of human life, some areas have the potential for general flood disasters due to land damage and lost rain catchment areas (Mashiro, 2013). Damage to land occurs due to illegal logging or is a type of soil rock type capability that is minimal in absorbing water. Land use increases the level of erosion, especially people in the regions have a low level of awareness of flood problems (Widayati and Wahyuni, 2020).

*Corresponding Author:
Email: idhamdj7@unisapalu.ac.id

Factors causing floods in Indonesia, triggered by rain factors, destroyed watershed retention (watersheds), errors in the construction of river channels, river silting factors and regional system errors and facilities and infrastructure development. The dominant factor occurs in the downstream river area and most of it is a big city (Hermon, 2015). Big cities in Indonesia experienced an increase in human population, allure encourages humans to move from rural to urban. Land for preservation and conservation areas changed to settlements, industrial factory, special urban areas in East Java Province from year to year which increased where in the period 2010-2020, the growth rate of East Java population was 0.79% and in the period 2020-2021, by 0.70% (BPS East Java, 2021)

Less optimal The ability of the Das watershed to accommodate water discharge causes floods followed by an erosion level, the steepness of river slopes, land use around the river, land and rock conditions, as well as the level of productivity and management of flood management by the government (Bayu, 2022). Floods occur in general urban areas caused by poor drainage systems and high rainfall. Both problems are seen as a serious problem that can hamper the planned development program, it needs serious attention by all pillars of development (Hermon, 2012). There needs to be a better method of identifying the causes of flooding and effective ways of handling so as to reduce the burden of the budget in resolving flood problems (Sayers et al., 2014).

The topography of Sidoarjo Regency is relatively low and flat there are 340 villages in the Datu Flatt plain area, which is the Brantas River Delta area which is located between the porong river in the south and river Surabaya in the north which is the downstream of the Brantas watershed (watershed) and empties into The Madura Strait, affected by tides, is published directly with the Madura Strait, the topographic condition of Sidoarjo Regency is a lowland lowland with a height of 0 to 25 m above sea level (MDPL), divided into three classes, 0-3 meters, is The coastal and salty watery areas, brackish, are located in the east, 3-10 meters, are the central area of fresh watery, and 10-25 meters, located in the western area (BPS Sidoarjo Regency, 2022).

The construction of inadequate drainage facilities and infrastructure has an impact during rain, standing water in various places, rain there is a paradox between population and water, population growth increases resulting in an increase, 2022. Conflict of interest and needs between humans versus water, conflict of space built versus green open space; Building Spatial Conflict versus Water Spatial Planning (Kodoatie & Robert, 2013).

Table 1. Flood risk index in Sidoarjo Regency

No	Tahun	Index	Description
1	2018	16,7	High
2	2019	16.65	High
3	2020	34,8	High
4	2021	38,50	High

Source: BNPB Sidoarjo Regency, 2022

Irrigation of Sidoarjo Regency Drainage System The area is very complex of the existence of carrier channels to irrigation and the Afvour channel (AFVOUR) in the appearance of a water level regulator. The high water level in the channel causes slow flow from the catchment area to the rainwater to the channel and inundation occurs. Conditions are exacerbated by backwater in the river channel in the area near the coast during tide, causing floods to not be directly receding (Bappeda Sidoarjo Regency, 2015), the following is displayed the flood risk index in Sidoarjo Regency as follows (Table 1).

Sidoarjo Regency has a high rainfall, the potential for flooding is very large, the system of handling puddles is a problem after rain, inundation inundated several areas of Sidoarjo Regency, the quality management system is integrated with the involvement and empowerment of the elements of the community, after the rain has not been running as expected (BNPD Sidoarjo, 2021). Flood control in Sidoarjo Regency requires handling, flood control after rain in Sidoarjo Regency, specifically the area of ketengan into distributed water regulations to areas often occurs in puddles in Waru District (Tropodo Village, Berbek, Wadungasri, Kepuh Post).

METHOD

Qualitative case studies, seasonal flood problems in Sidoarjo Regency often in the rainy season become a problem that has not found the right solution. Get data from various primary and secondary research sources (observation, artifacts, archives, documents, interviews, compound sources). systematic to individuals, groups, organizations or activities. In case studies, case data applies certain cases are not generalized. Case study data is possible to be used to explore and examine comprehensively of a research object. Case studies are used as a foundation in building theory. The development of theory through case studies, is one of the research strategies involving one creating theoretical construction, proposition or theory of the middle range based on cases and empirical facts (Eisenhardt, 1989). Analysis of data using atlas.ti 9.

RESULT AND DISCUSSION

Urbanization causes the development of urban spatial planning to be uncontrolled impact on the problem of flooding to increase, urban spatial planning, activity in the context of meeting the needs of human life is increasing both in the economic, social and environmental dimensions, resulting in excessive exploitation of nature, changes in land use (KNOX, 2005), resulting in uncontrolled and declining environmental carrying capacity forcing residents who live in the Sidoarjo Regency to utilize existing land in the future will result in flooding (Asdak, 2010).

Indonesia is an archipelago located in the tropical region which has two seasons, namely the dry season that occurs in April to October and the rainy season that occurs in October to April, every year during the rainy season, several regions in Indonesia Experiencing the event of a jir tire, which is caused by natural factors or can occur due to human activity, the Metoerology and Geophysifika Agency (BMKG, 2022).

Land Space Land Use where the fulfillment of human survival is limited to administrative boundaries of villages/kelurahan, sub -districts, districts, cities, districts and provinces. Land space water is technically limited by hydrological boundaries such as watersheds (watersheds), groundwater basins (CAT), non-CAT and River Areas (WS).

Administrative boundaries and hydrological limits Different functions and characters, administrative boundaries are more dominant in functioning government administration while the hydrological limit of water character flows gravitational from higher place to lower place (Kodoatie, 2012).

The distribution and population are also uneven between cities and villages. Many villagers moved to the city because of the utility, infrastructure and other facilities in the city better and more complete than in the village. The development of this development resulted in a reduction in green open space due to increased space. Almost all big cities have increased flood disasters, both from the amount of discharge, inundation areas and water residence time (Kodoatie, 2013).

Population growth and development development with Indonesia's population reached 275.36 million and will continue to increase, the number increased 1.48 million jowa 9 0.54 % from December 2021 Indonesia ranked 4th after the People's Republic of China, India and the United States. The distribution of Indonesia's population is also uneven, 58% of the population lives in Java even though its area is only 7% of the land area of Indonesia (BPS, 2022).

The flow of urbanization has an impact on the insistence of land needs, the use of agriculture and non -agriculturalization has a reflection of differences in growth and inequality of development facilities between regions (Keynes, 2018), rural areas with urban areas encouraging population movements, showing that social problems are caused by complex urbanization (Hayati, 2020) , Increasing the population in the city, unemployment, increased homeless and growing slums, increasing traffic jams and traffic accidents, there is an increase in crime, overpopulation, and urban sprawl is a social impact of urbanization in big cities (Inayah, 2021).

Urbanization causes the development of urban spatial planning to be uncontrolled impact on the problem of flooding to increase, urban spatial planning, activity in the context of meeting the needs of human life is increasing both in the economic, social and environmental dimensions, resulting in excessive exploitation of nature, changes in land use (KNOX, 2005), resulting in uncontrolled and declining environmental carrying capacity forcing residents who live in the Sidoarjo Regency to utilize existing land in the future will result in flooding (Asdak, 2010).

Field findings from observations were carried out in January 2021, found the normalization of the Pucang River had been carried out in less able to overcome floods, as an alternative to reducing flowing discharge in Afvoer Pucang. Reduction of discharge is needed when the discharge flows exceeding the flow capacity of the Pucang river. Efforts have been made to overcome the problem of inundation are still local and sectoral, namely by quickly flowing inundation water from the nearest residential area, it needs to be assisted with a flood pump, another effort made is by dredging channels that experience sediment or normalization of channels to increase channel capacities, manufacturing plengsengan or elevation of river embankments for channels (Nanda, 2022).

The process of flood control in the city is very long because the administrative process, resulting in unreasonable development is associated with the potential and needs of water resources. So there is a need for continuous policies between cities, regencies and provinces. Recorded in 2021 East Java experienced various natural disasters, with the incidence of dating.

CONCLUSION

Seasonal flood disaster control in Sidoarjo Regency by involving local communities is an important approach by means of direct supervision by local communities, counseling on good water management practices, emergency response training, community-based infrastructure development and coordination between local governments and local communities, forms of participation Concrete local communities in Sidoarjo Regency in handling floods can include several, a). The formation of a local emergency response team consists of local residents trained to provide first aid and evacuation when floods occur. b) Extension programs on waste management and drainage involving active participation of citizens maintaining environmental cleanliness. c) Training on the use of flood prevention tools, such as sandbags or simple water transfer systems. d) Participatory planning process at the local level, where residents have the opportunity to provide input on the flood management strategy proposed by the local government. e) Formation of volunteer groups cleaning rivers and waterways and doing regular maintenance preventing blocked water flow. f) Campaign of public awareness about it is important to comply with flood zoning regulations and development is responsible along the watershed. Through the active participation of local communities in Sidoarjo Regency, flood management efforts can be more effective and sustainable.

REFERENCES

BPPD. (2015). *Rencana Tata Ruang Wilayah Kabupaten Sidoarjo*. Badan Perenancanaan dan Pembangunan Daerah Kabupaten Sidoarjo.

BPS. (2022). *Kecamatan Sidoarjo dalam Angka.* Badan Pusat Statistik Sidoarjo Jawa Timur.

Bungin, B. (2007). *Penelitian Kualitatif, Komunikasi, Ekonomi, Kebijakan Publik dan Ilmu Sosial Lainnya.* Putra Grafika.

Goetsch, D., & Davis, S. (1994). *Introduction to Total Quality Management: Quality, Productivity, Competitiveness.* Prentice Hall Int. Inc, London.

Hermon, D. (2015). *Geografi Bencana Alam*. PT.Raja Grafindo Persada.

Idham., Budiyanto., Asik, N. F., & Ilham. (2022). Collaborative Tourism Reconstruction Of The Bay Area In Palu City Following The 2018 Earthquake And Tsunami Disaster. *International Journal of Educational Research &Amp; Social Sciences*, *3*(6), 2310–2317. https://doi.org/10.51601/ijersc.v3i6.546.

Khairani, A. I., Manurung, W. R. A. (2019). *Metodelogi Penelitian Kualitatif Case Study*. Trans Info Media.

Kodoatie, R. J. (2013). *Rekayasa dan Manajemen Banjir Kota.* Yogyakarta.

Kodoatie, R. J. (2021). *Tata Ruang Air Tanah.* Andi Yogyakarta.

Kodoatie, R. J. dan Sugiyanto. (2002). *Banjir, Beberapa Penyebab dan Metode Pengendaliannya dalam Perspektif Lingkungan*. Pustaka Pelajar.

Moleong, L. (2016). *Metode Penelitian Kualitatif, Edisi Revisi*. Remaja.

Miles, B. Mathew., & Michael, H. (2009). *Qualitative Data Analysis.* UI –Press.

Musri, M. A. (2020). *Manajemen Lingkungan Dalam Pengendalian Banjir.* Penerbit Budapest International Research And Critics University (Bircu-Publishing).

Maryono, A. (2005). *Menangani Banjir, Kekeringan dan Lingkungan.* Gadjah Mada University Press.

Prawito, D. (2014). *Paparan Manajemen Banjir di Kota Sidoarjo.* Badan Penanggulangan Bencana Daerah (BPBD) Kabupaten Sidoarjo.

Sallis, E. (2002). *Total Quality Management in Education* . Kogan Page Ltd, London.

Sadyohutomo, M. (2008). *Manajemen Kota dan Wilayah : Realita dan Tantangan*. Edisi ke 2. Bumi Aksara.

Sashkin M. & Kiser K, 1993, *Putting Total Quality Management to Work***.** San Francisco: Berrett-Kohler Pub.

Sudaryono, 2018, *Metodologi Penelitian Kuantitatif, Kualitatif , dan Mix Method*, Edisi Kedua, Raja Grafindo Persada Remaja Rosdakarya.

Tjiptono, F., & Diana, A. (2000). *Total Quality Management.* Penerbit ANDI.