

Community Empowerment in Drainage Management to Overcome Floods

Ilwandri¹, Apriani Sijabat², Makkah HM³, Andi Sri Rezky Wulandari⁴, Andi Rahmah⁵, Santi mareta⁶, Nanic Framulya⁷

^{1,4,7}Lecturer in Civil Engineering, Academy of Adikarya Engineering, Indonesia

²Lecturer of Physics Education, Nommensen University Indonesia

^{3,5} Universitas Indonesia Timur, Indonesia

⁴ Universitas Muslim Indonesia, Indonesia

²Lecturer of Physics Education, Nommensen University Indonesia

Corresponding email:ilwandri@gmail.com

Abstract

Flooding is a serious problem that often disrupts the lives of urban communities. Increased rainfall intensity, climate change, and rapid urban development have made existing drainage systems less effective at coping with flooding. To face this challenge, this study aims to examine community empowerment efforts in drainage management as a flood mitigation strategy. This research was conducted by combining participatory approaches and field research methods. Local communities, local governments, and stakeholders are involved in planning, implementing, and evaluating empowerment programs. This program includes skills training, education on the importance of drainage maintenance, as well as the formation of community groups active in drainage maintenance. The results showed that community empowerment in drainage management has had a positive impact in reducing flood risk. Community groups involved in this program actively maintain the cleanliness and drainage function in their neighborhoods. In addition, education about climate change and rain patterns also helps people to be better prepared for extreme conditions.

Keywords: Community Empowerment, Drainage Management, Flooding, Participation, Disaster Mitigation

Abstract

Flooding is a serious problem that often disrupts the lives of urban communities. Increasing rain intensity, climate change and rapid urban development have made existing drainage systems less effective in dealing with floods. To face this challenge, this research aims to examine community empowerment efforts in drainage management as a flood mitigation strategy. This research was conducted by combining a participatory approach and field research methods. Local communities, regional governments and stakeholders are involved in planning, implementing and evaluating empowerment programs. This program includes skills training, education about the importance of drainage maintenance, as well as the formation of community groups that are active in drainage maintenance. The research results show that community empowerment in drainage management has had a positive impact in reducing the risk of flooding. Community groups involved in this program actively maintain the cleanliness and function of drainage in their environment. Apart from that, education about climate change and rain patterns also helps people to be better prepared to face extreme conditions

Keywords: Maximum 5 keywords Community Empowerment, Drainage Management, Floods, Participation, Disaster Mitigation



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INTRODUCTION

Effective and sustainable drainage management has a very important role in overcoming the problem of flooding that is increasingly occurring in various regions around the world (Wiskow & Ploeg, 2003). The phenomenon of flooding often results from a variety of factors, including climate change, increased urban development, and the inability of existing drainage systems to handle high volumes of rainwater. Therefore, community empowerment in drainage management is crucial to create sustainable solutions in reducing flood risk (Damayanti et al., 2020).

One of the keys in understanding the impact of flooding is to realize that this is not only a technical issue, but also involves social factors and community participation. Communities actively involved in drainage management efforts have great potential in identifying problems, designing solutions and implementing effective preventive measures. Therefore, community empowerment in drainage management can be a significant first step to overcome flooding problems (Sultana & Thompson, 2018; Oyebode & Paul, 2023). Community empowerment can also create stronger social bonds within the community. When residents feel involved in drainage management efforts, they tend to care more about their surroundings. This can motivate them to keep drainage clean, reduce plastic waste, and take care of vegetation that can help absorb rainwater. Thus, community empowerment can have a positive impact on the overall quality of the environment.

Furthermore, collaboration between the government, NGOs, and the private sector is also very important in efforts to empower communities in drainage management. Through strong partnerships, diverse resources and knowledge can combine to create more effective and sustainable solutions. Governments can provide regulation and financial support, NGOs can coordinate social activities, and the private sector can contribute with necessary technological innovations (Munawir et al., 2023).

In a global context marked by increasingly extreme climate change, attention to drainage management as a flood mitigation strategy is becoming increasingly urgent (Siddiqi et al., 2023). By applying a community empowerment approach, we can achieve sustainable solutions to address flood risk, while also increasing citizen participation in caring for their environment. Therefore, this journal will further examine community empowerment in drainage management as an important step in facing future flood challenges (Hosseinzadeh & Haghghi, 2023).

A holistic approach and focuses on the leading role of communities in flood mitigation. While much of previous research has focused more on the technical and engineering aspects of coping with flooding, this approach highlights the importance of understanding social interactions and active community participation in drainage management. This is a significant contribution in broadening our understanding of how to deal with floods more effectively, by integrating the social dimension as an integral part of the solution.

In addition, previous research brought a special approach by involving cooperation between government, NGOs, and the private sector in the context of drainage management. This partnership is considered one of the key factors that has not been fully explored in previous research. This emphasis on collaborative roles presents a new dynamic in flood management, where resources, expertise, and financial support from various parties can synergize to create more comprehensive and sustainable solutions. Thus, this journal makes a significant contribution in the development of a new paradigm

in drainage management that is more inclusive and community-oriented. Therefore, this study aims to develop Community Empowerment in Drainage Management to Overcome Floods.

IMPLEMENTATION METHOD

The research method used in this journal refers to a survey approach to explore comprehensive information on community empowerment in drainage management to overcome flooding. To assess the role of cooperation between governments, NGOs, and the private sector in drainage management, we will collect data through literature reviews, policy analysis, and interviews with communities. Using the method of triangulating data from various sources, we will compile a comprehensive picture of this cooperation and its impact on drainage management.

RESULTS AND DISCUSSION

Part This collaboration also has a positive impact on community empowerment. People involved in drainage management programs involving various sectors feel more ownership of this project. They become more concerned about their surroundings and actively participate in maintaining clean drainage, reducing plastic waste, and caring for vegetation that helps cope with flooding (Malik & Haidar, 2020). It illustrates how collaboration between governments, NGOs, and the private sector can strengthen social bonds in communities and mobilize active community participation in drainage management efforts to address flooding.



Figure 1. Socialization to the Community

Figure 1. Explain socialization to the public about flood tire control. In drainage management, cooperation between the government, NGOs, and the private sector has great potential in improving the effectiveness and efficiency of flood mitigation measures (Novrima & Anggraheni, 2023). The interview results show that the government has an important role in designing policies, regulations, and budget allocations for drainage management. NGOs bring expertise in mobilizing communities, disseminating drainage management programs, and monitoring policy implementation. Meanwhile, the private sector can contribute

with advanced technologies in drainage infrastructure and financial investments that can support drainage management projects.



Figure 2. Cleaning of drainage channels to cope with flooding

Community empowerment is one of the keys to achieving success in efforts to reduce flood risk. In this regard, this research makes a significant contribution in developing a new paradigm in drainage management that is more inclusive and community-oriented. By integrating social aspects and collaboration of different sectors, we can create More sustainable solutions to future flood challenges (Gautama et al., 2023). Furthermore, community empowerment plays an important role in overcoming flood problems through effective drainage management. In this study, community empowerment includes the active participation of residents in designing, implementing, and monitoring drainage management programs. The results show that through this approach, communities become more instrumental in maintaining clean drainage, reducing plastic waste, and supporting vegetation that can help absorb rainwater, all factors that contribute to flood risk reduction (Nacpil et al., 2023).

CONCLUSION

Community Empowerment in Drainage Management to Overcome Floods is that community empowerment and collaboration between government, NGOs, and the private sector play an important role in addressing flood problems through effective drainage management. In this context, community empowerment through active citizen participation has been shown to increase environmental awareness, reduce flood risk, and strengthen social bonds in communities. In addition, cooperation between various parties in drainage management creates synergies that result in more successful and sustainable projects. This community empowerment and collaboration are important steps in developing more holistic and inclusive solutions to face future flood problems

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