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# Exploring The Perception of BPBD Apparatus on Disaster Budgeting Using a Phenomenological Approach

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## ABSTRACT

Recent years have seen an increase in the frequency and severity of natural disasters, which has presented major difficulties to governments and people worldwide. The consequences of natural disasters have significantly grown in light of the effects of globalization and climate change. It is critical that governments and local governments prioritize disaster management and invest adequate budgets and resources to alleviate the effects of natural disasters. This study investigates the perceptions of the Regional Agency for Disaster Management or Badan Penanggulangan Bencana Daerah (BPBD) apparatus in the Indonesian Sleman and Bantul districts about disaster budgeting. The study adopts a phenomenology approach, conducts face-to-face interviews and finds that disaster risk assessment plays a significant role in pre-disaster budget allocation, while historical experiences dictate the allocation of funds during and after a disaster. Effective and efficient disaster budgeting in these districts requires inter-agency collaboration and a participatory approach involving volunteer communities and the public. The practical implication shows that budget constraints necessitate alternative sources of funding and offers detailed insights into the subjective experiences of BPBD apparatus, shedding light on the core aspects of disaster budgeting to improve policies and practices aimed at strengthening disaster resilience.

## INTRODUCTION

In recent years, there has been a rise in the frequency and severity of natural disasters, presenting enormous difficulties to communities and governments. These disasters have enduring social, economic, and environmental consequences in addition to causing loss of life and livelihoods (Asiah et al., 2020). Indonesia is one of the disaster-prone countries (Andreastuti et al., 2023; Fahlevi & et al., 2019a; Oktari et al., 2017; Radtke, 2019; Rinanda, 2013; Yunus et al., 2022) to have the desired public response during a crisis, it is necessary to improve the community's understanding of volcanoes. Knowledge, experience, risk perception, communication, and drills shape good community responses. These require a bottom-up process of communication and involvement of the community in decision-making and engagement with the government. Thus, proper crisis management requires top-down and bottom-up communication and joint work between the scientists, decision-makers, and the community. The response from the community can be improved through community-based preparedness with a culturally sensitive approach that facilitates a strong relationship and participation of community members according to their customs. The *Wajib Latih Penanggulangan Bencana* (WLPB: Compulsory Disaster Management Training Program, thus requiring effective and efficient disaster budgeting. Governments and local authorities must prioritize disaster management and invest adequate funding and resources to reduce the impacts of natural disasters. The repercussions of natural disasters have significantly grown due to climate change and globalization.

This requires the implementation of effective and efficient disaster budgeting strategies to guarantee prompt and suitable responses during emergencies. Local authorities must possess a thorough awareness of the requirements and obstacles involved in disaster budgeting. Disaster budgeting is essential for ensuring efficient disaster management and response. It enables the distribution of cash and resources beforehand, reducing the effects of disasters and aiding in a prompt and organized reaction.

The Regional Agency for Disaster Management or *Badan Penanggulangan Bencana Daerah* (BPBD)

in Indonesia is the primary agency in charge of disaster management at the regional level. Studying the real-life experiences and viewpoints of BPBD personnel on disaster budgeting is crucial for improving resource distribution effectiveness and building disaster resilience. BPBD professionals recognize the significance of disaster budgeting in facilitating efficient planning and preparation for prospective disasters. They understand that allocating a specific budget for disaster management allows them to focus on important areas like training and providing equipment for emergency response teams, running public awareness programs, and implementing preventive measures.

The BPBD personnel recognize that disaster budgeting facilitates the effective allocation of resources before and after a disaster. It enables the rapid delivery of essential support and aid to impacted communities, ensuring their needs are addressed. They recognize that budgeting allows them to oversee and monitor the use of finances, ensuring openness and responsibility in their actions.

Establishing a transparent disaster budget enables BPBD staff to effectively lobby for sufficient funds and resources from higher government authorities. This guarantees that they possess the essential resources to efficiently address calamities and safeguard the lives and well-being of their people (Artiga et al., 2020). During a crisis, a carefully prepared and sufficiently financed budget is crucial for successful response and recovery operations.

Budget adequacy is the main key to the success of disaster management programs in Indonesia (Silmi et al., 2019). Therefore, the disaster budget must be well prepared to deal with various disasters that often occur in Indonesia, both pre-disaster, emergency response, and post-disaster.

It is very important to conduct studies on disaster budgeting because disaster-friendly countries should have adequate disaster budgets (Mirjas et al., 2021). This is allegedly caused by the government's lack of support in prioritizing the disaster budget (Shalih & Nugroho, 2021). Central and regional governments are required to allocate budgets related to disaster management programs (Fahlevi et al., 2019b). However, the disaster budget allocation at the central level is still below international standards (1%) of the total

state revenue and expenditure budget (APBN). This was found in research on the disaster budget in the City of Banda Aceh with the result that the Banda Aceh BPBD only received a budget of no more than 0.59% of the total Banda Aceh City Revenue and Expenditure Budget (APBK) between 2007 and 2015 (Oktari et al., 2017). More than 50% of local governments in Indonesia allocate less disaster funds than needed (Dartanto et al., 2017). This study also reveals that the disaster budget allocation in the Sleman and Bantul Regency BPBDs has a very small percentage, namely only 0.44% and 0.47% of the total Regional Revenue and Expenditure Budget (APBD). Table 1 shows the percentage of budget allocations for the Sleman and Bantul Regencies.

**Table 1. Sleman and Bantul Regency Budget Allocations for 2022**

District	Total BPBD Budget	Total APBD	%
Sleman	Rp13,043,937,829	Rp2,900,013,615,226	0.44
Bantul	Rp10,208,155,991	Rp2,142,809,035,633	0.47

Disaster budgeting in Indonesia still has weaknesses, namely the lack of optimal disaster budget support (Apryana et al., 2020; Silmi et al., 2019), slow mechanism for the disaster management budget process (Mardalaila et al., 2022), weak coordination between related agencies (Muktaf & Santoso, 2018), too focused on the emergency and post-disaster response stages and ignoring pre-disaster or disaster prevention aspects and not considering the basic characteristics and uniqueness of disasters (Mirjas et al., 2021).

Regional disaster budgeting is carried out by BPBD. Empowering BPBDs and strengthening the provincial/city BPBD network vertically and horizontally will improve the disaster management system and enable local actors to play a more important role in disaster management (Putra & Matsuyuki, 2019). BPBD is a regional government agency that carries out disaster management in the region (*Perban Number 03 of 2018*). BPBD consists of BPBD at the provincial level and BPBD at the district/city level. BPBD has functions, namely 1) formulating and establishing disaster management policies and handling refugees by acting quickly and precisely, effectively and efficiently; and 2) coordinating the implementation of disaster management activities in a planned, integrated, and comprehensive manner.

Phenomenology provides a useful structure for investigating the personal experiences of individuals and revealing the fundamental nature of things. This study aims to explore the detailed personal experiences of BPBD personnel in disaster budgeting using a phenomenological approach. It strives to reveal the underlying structures and meanings in their perceptions.

A phenomenological study can be conducted to analyze the perspectives of the BPBD apparatus in the Sleman and Bantul areas, providing useful insights into the practical aspects of disaster budgeting. Studying the experiences and viewpoints of the BPBD personnel might reveal the specific factors and limitations they encounter in distributing the budget and resources for disaster management.

The phenomenon that occurs in Indonesia is that there are differences in perception between

Regional Disaster Management Agencies (BPBD) in viewing disasters which results in differences in the disaster budget planning process. This perception varies, from seeing disasters as project opportunities that have the potential to cause fraud, to troublesome challenges.

Indonesia, as a disaster-prone country, faces the challenge of a lack of awareness and knowledge about disasters among the government and society. In this developing country, the lack of attention to disasters is a crucial issue, especially considering the significant impact of disasters on the Indonesian economy. The importance of having an adequate budget, especially for mitigation and prevention programs, is the main key to reducing the impact of disasters. In addition, pre-disaster budgets can increase public awareness of disasters (Fahlevi, 2020).

Gaining insight into the complexities of disaster budgeting from the perspective of individuals directly engaged might offer significant information for crafting specific policies and methods. It can help identify the exact areas needing attention and investment, allowing authorities to customize their budgeting processes to better tackle the changing difficulties presented by natural disasters.

Furthermore, using a phenomenological approach enables us to comprehend the subtleties and complexities of the BPBD apparatus's experiences, leading to a more profound insight into the aspects that impact their decision-making

processes. This can help in creating disaster budgeting frameworks that are more responsive and adaptive, better able to protect communities, and reduce the extensive effects of natural disasters (Onyeneke, 2017; Bly et al., 2021).

This study can enhance the current literature on disaster budgeting by offering a qualitative analysis that complements the quantitative research methods typically employed. Quantitative data analysis employs mathematical and statistical techniques to analyze and interpret numerical data. Analysis sometimes lacks the profound insights that can only be acquired through qualitative research approaches (Apryana et al., 2020). This study aims to reveal distinctive issues and limitations in disaster budgeting by analyzing the perspectives of BPBD personnel.

The challenges involve political motivations to postpone acknowledging the expenses of disaster preparedness until after a disaster, the perception that it is complex to allocate funds beforehand for disaster prevention, and the challenge of directly linking budget allocations to disaster mitigation and prevention activities.

Studies on disaster budgeting are still limited and new, thus creating a research gap regarding how local governments, especially BPBD, plan disaster budgets according to the type and level of disaster in their region. This study uses qualitative methods and a phenomenological approach to explore more deeply the perceptions of Regional Disaster Management Agency (BPBD) officials in Sleman and Bantul Regencies regarding disaster budgeting. The reasons for selecting the research location are: first, geographically, Indonesia's position is very vulnerable to the impact of volcanic eruptions and earthquakes (Widodo & Waskita, 2014); secondly, based on data from BNPB in 2022, Sleman is an area prone to volcanic eruptions with a Disaster Risk Index (IRB) score of 12.88 (BNPB, 2022). The risk index of 12.88 is considered high (BNPB, 2022); Third, based on data from BNPB in 2022, Bantul is an earthquake-prone area with a Disaster Risk Index (IRB) score of 14.04 (BNPB, 2022). The risk index of 14.04 is considered high (BNPB, 2022). Table 2 shows the types and levels of disasters in the Sleman and Bantul Regencies.

**Table 2. Types and Levels of Disasters in Sleman and Bantul**

Districts in 2022			
District	Type of Disaster	Risk Index Score	Disaster Level
Sleman	Volcanic Eruption	12.88	High
Bantul	Earthquake	14.04	High

The results of this study show that the disaster budgeting process by BPBD involves three stages, namely pre-disaster, during emergency response, and post-disaster. In the pre-disaster stage, the budget is planned based on risk studies, while in the emergency response and post-disaster stages, historical experience is the main reference. Inter-agency collaboration and participatory approaches are essential in creating disaster budgets that are responsive to the specific needs of disaster-prone areas, such as Sleman and Bantul. This study emphasizes the importance of local community involvement in overcoming budget constraints and regulatory inconsistencies and suggests alternative funding sources such as disaster insurance, donations, and CSR.

This study provides a theoretical contribution to Public Accounting, as well as being a reference source for further research. Practically, these findings are expected to help BPBD and local governments in better disaster budget planning, as well as support the creation of more consistent disaster budget policies in Indonesia. Similarly, the study offers insight into the perspectives and encounters of the BPBD apparatus to evaluate the efficacy of disaster management awareness campaigns in regional district settings and pinpoints deficiencies and opportunities for enhancing collaboration among organizations engaged in disaster management. This study seeks to enhance the public comprehension of disaster budgeting by examining the perspectives and encounters of the BPBD personnel. This will offer significant insights into the obstacles and possibilities in disaster budgeting and guide policy decisions to guarantee a more efficient distribution of resources for disaster management.

## LITERATURE REVIEW

### *Budgets and Budgeting*

A budget is defined as a statement regarding the estimated performance to be achieved over a certain period expressed in financial measures (Mardiasmo, 2018). Budgets are closely related to budgeting. Budgeting is a process or method for preparing a budget (Braide, 2002; Mardiasmo, 2018; Nafarin, 2007). The budgeting process in public organizations begins when the strategic formulation and planning process is carried out. If public organizations can formulate and plan strategies well, then the public organization's goals are expected to be achieved. However, budgeting in public organizations is quite complicated and contains high political nuances (LeLoup, 2002; Mardiasmo, 2018).

### *Budget and Budgeting Theories*

#### **Traditional Budgeting**

Traditional budgeting is an approach commonly used by developing countries. There are two main characteristics of a traditional budget, namely the method of preparing a budget based on an incrementalism approach and the structure and arrangement of a line-item budget. Incrementalism is an old paradigm, that is the budgeting process is incremental, not comprehensive (Wildavsky, 1964).

Traditional budgets are incrementalist in nature; they merely add or subtract amounts in rupiah to existing budget items, using data from the previous year as a basis to adjust the magnitude of these additions or reductions. This approach is taken without conducting in-depth studies. Traditional incrementalism budgets accept the concept of historical cost of service. The impact of using the historical cost of service is that an item, program, or activity will appear again in the following year's budget even though the item is no longer needed.

The traditional budget structure and arrangement is also line-item. The line-item budget structure is simple, easy to understand, and does not require too much time to develop. The essence of a line-item budget is line breakdown (a process that allocates funds based on individual cost objects), which allows decision-makers to exercise control over budget operations by tracking funds allocated to individual line items. Items typically include personal services (salaries and wages), materials

and supplies, contracts, capital expenditures, debt payments, etc (Khan, 2019).

The budget system in Indonesia initially followed a traditional budgeting system which ended gradually until the 1970/1971 budget year for the development budget, while the routine budget was prepared traditionally ending in 1973/1974. The traditional budget system places more emphasis on aspects of budget implementation and supervision.

#### **Performance-based Budgeting**

The performance approach was developed to overcome various weaknesses contained in traditional budgets, especially weaknesses caused by the absence of benchmarks that can be used to measure performance in achieving public service goals and objectives. Budgeting with a performance approach places great emphasis on the concept of value for money and monitoring output performance. This approach also prioritizes mechanisms for determining and prioritizing goals as well as a systematic and rational approach in the decision-making process. Performance assessment is based on the implementation of value for money and budget effectiveness. This approach tends to reject the traditional budget view which assumes that without direction and intervention, the government will abuse its position and be wasteful (over-spending).

Traditional budgeting patterns are not suitable for disasters because budget allocations must be higher in areas with greater disaster risk (Fahlevi et al., 2019b) and allocated based on the needs of each disaster stage (Mirjas et al., 2021).

According to the performance budget approach, government dominance can be monitored and controlled through the implementation of internal cost awareness, financial audits, and performance audits, as well as external performance evaluation. In other words, the government is forced to act cost-mindedly and must be efficient. Apart from being encouraged to use funds economically, the government is also required to be able to achieve its stated goals. Therefore, to achieve this goal, it is necessary to have a benchmark funding program as a performance standard.

#### **Disaster Budgeting in Indonesia**

Disaster budgets in Indonesia based on allocation and use are divided into two groups,

namely routine activity budgets and disaster management budgets (Fahlevi, 2020). The routine activity budget is an activity budget that supports or is oriented towards disaster management in BNPB and BPBD and is spread across institutions and ministries (central level) as well as in every other regional government organization (OPD). The disaster management budget is a budget that is always budgeted and available for use if needed. The central government budgets three types of disaster management budgets in the APBN every year (PP Nomor 22 Tahun 2008) including 1) disaster contingency funds, namely several reserve funds to anticipate the possibility of certain disasters occurring; 2) ready-to-use funds, namely funds allocated for disaster emergency response activities that are on call (available for use); and social assistance funds with a grant pattern, namely funds for post-disaster phase activities which include rehabilitation and reconstruction of disaster-affected buildings.

These three types of budgets are allocated to the Budget Implementation List (DIPA) of the National Disaster Management Agency (BNPB). In line with the central government, each regional government is required to reserve a certain amount of budget for disaster emergencies. This reserve fund is called Unexpected Expenditures (BTT), and the mechanism for using it is the same as for disaster management in the APBN. If the governor regent or mayor declares a disaster emergency status, then BTT can be used to support the disaster management efforts being faced.

## RESEARCH METHODS

This research aims to explore the perceptions of BPBD officials in Sleman and Bantul Regencies regarding disaster budgeting. Thus, a phenomenological approach is considered appropriate as it entails a process of bracketing preconceptions and immersing oneself in the participants' lived experiences, challenges and perspectives related to budget allocation for disaster management, through the following steps: 1) formulating research questions; 2) selecting participants; 3) collect data through in-depth face-to-face interviews; 4) analyzing data which includes phenomenological reduction, identifying the structure or essence of the observed experience and

exploring the underlying meaning and patterns that emerge from the data; 5) identifying data, namely organizing data into larger units of meaning; 6) write a descriptive narrative that describes in depth the observed experience and allows the reader to feel and understand the experience; 7) explore contradictions and variations to help understand the complexity and diversity of individual experiences; 8) validity and reliability, namely being open to interpretation and seeking clarity through reflection and discussion with fellow researchers; 9) ethical considerations, namely privacy and protection of the rights of researchers and those being researched (Moustakas, 1994).

The data collection process begins by contacting the Sleman and Bantul Regency BPBD offices to apply for a research permit. An interview guide was prepared by composing questions related to disaster perceptions and disaster budgeting. After being given research permission, the researcher contacted potential informants via WhatsApp to determine an interview schedule. Data collection was carried out using face-to-face interview techniques with four informants who work as BPBD officers in Sleman and Bantul Regencies with an interview duration for each informant of 40-60 minutes. In this case, the researcher used a bracketing technique, which was done by not linking the information told by the first informant to the last informant during the interview so that the experience told by the informant had its purity without any intervention in the answer from the researcher. During the interview process, the digital audio recording device is always active to record all information from the informant. Data collection was considered sufficient to reach the fourth informant. This is because the data obtained has been saturated or there is no new information submitted by the last informant. The informant has a background in food technology, disasters, animal husbandry, and veterinary paramedics. Table 3 shows a list of research informants.

**Table 3. Research Informants**

<u>District</u>	<u>Informants</u>
Sleman	MW
Sleman	AK
Bantul	SN
Bantul	BD

In phenomenological studies, the participant size can range from 2 to 25 (Cresswell, 2012). The selection of participants must reflect and represent the homogeneity that exists among the sample group of participants. Furthermore, phenomenological studies can be carried out on relatively small sample sizes, and the aim is to find a fairly homogeneous sample so that within the sample, the researcher can examine convergence and divergence in detail.

In this research, apart from conducting face-to-face interviews in the field, researchers also observed the 2018-2022 IRBI and DIBI documents. In-depth interviews were conducted with informants, namely BPBD officials from Sleman and Bantul Regencies, who are involved and responsible for disaster budgeting. The focus of the information sought is the informant's interpretation, understanding, and experience regarding disaster budgeting. Researchers explore this information through formal and non-formal questions and answers, combined with observations of phenomena in the field to obtain a more comprehensive understanding.

The results of the interviews were transcribed manually by the researcher by listening to and writing down word for word what was conveyed by the participants. After that, coding was carried out using ATLAS.ti software which includes open coding, axial coding, and selective coding (Strauss & Corbin, 1998), so that a categorization of themes is produced which produces assertions/propositions/theories. The coding process in this research follows the code-to-theory flow model developed by Saldana e.g. Figure 1 in the following.

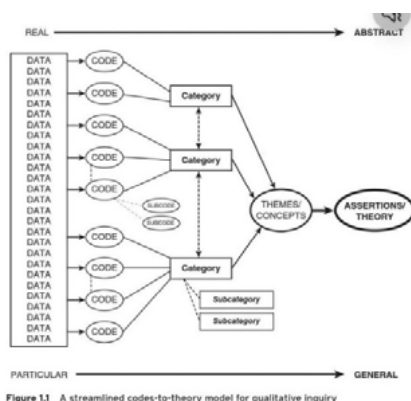


Figure 1. A code-to-theory flow model for qualitative studies (Saldana, 2021)

This research adopts the phenomenological

method developed by Edmund Husserl (1859-1938), which aims to describe phenomena in their most original and pure form. Phenomenological studies understand a phenomenon experienced in a person's consciousness, thoughts, and actions, including the value or aesthetic acceptance of the phenomenon (Kusumawanti & Arawindha, 2018).

Phenomenological research focuses on a deep understanding of the quality of an individual's experiences, allowing the researcher to identify and evaluate the essence of those experiences. The main aim of this approach is not to formulate grand theories or develop models, but to describe accurately and in detail 'lived experiences', namely unique and real experiences in a person's life, such as traumatic experiences that are felt deeply and are directly related to the research topic (Morissan, 2019).

The main advantage of phenomenological studies lies in their ability to reveal experiences hidden in the philosophical and psychological dimensions of individuals through narrative, allowing researchers to understand the subject's lived experiences more realistically. Husserl viewed phenomenology as the study of the essence of consciousness itself, "the science of the nature of what is thought". With this approach, phenomenological research attracts the interest of researchers from various scientific disciplines, thanks to its uniqueness in exploring and understanding subjective human experiences (Kahija, 2017).

Stages of phenomenological research according to Husserl. First, the researcher did epoche, namely staying away or distancing himself (Moustakas, 1994). Epoche allows researchers to enter a pure internal world, making it easier to understand themselves and others. Thus, the biggest challenge when doing epoche is being open or honest with yourself (Cresswell, 2009).

Second, the researcher carries out a phenomenological reduction to explain in linguistic terms how the object looks. Reduction allows researchers to carry out a process of exploration, analysis, and description of phenomena to obtain a complete and in-depth picture of the phenomena that occur.

Third, the researcher used variations of imagination to find themes that emerged from the results of interviews with informants. By utilizing

imagination, researchers make something that was previously invisibly visible.

Fourth, researchers carry out synthetic meaning and essence, namely intuitive integration of the basics of textural and structural descriptions into a statement that describes the nature of the phenomenon as a whole. Husserl defines essence as something general and universally applicable, the condition or quality of being that something. The essence is never fully revealed. A synthesis of fundamental textural structures representing this essence in a particular time and place, and one's imaginative viewpoint and reflective study of the phenomenon.

Researchers used triangulation to ensure the validity and reliability of the research by asking the same questions to each informant and comparing the perceptions of the answers from each informant. Next, member checking was carried out by sending the results of the interview transcript to each informant to ensure that the transcript data was by the interview that had been conducted.

## RESULTS AND DISCUSSION

### *Disaster Risk Studies and Historical Experience Determine the Amount of Budget Allocation*

The phenomenological analysis revealed several key themes encapsulating the lived experiences and perceptions of the BPBD apparatus regarding disaster budgeting. Figure 2 presents the results of data processing from budget allocation categories whose amounts are influenced by disaster risk studies and historical experience.

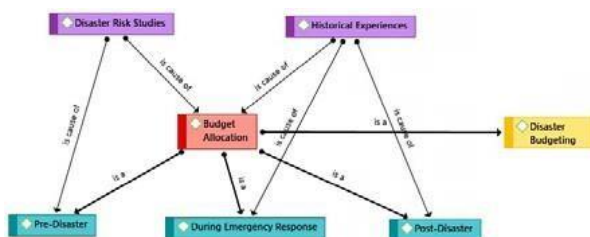


Figure 2. Results of data processing for budget allocation categories

Disaster budgeting is interpreted as the process of determining the amount of budget allocation for each program and activity in monetary units at BPBD. According to UU/24/2007, disaster management in principle regulates the stages of a

disaster including pre-disaster, during emergency response, and post-disaster, including disaster budgeting as stated by the informant in the following interview excerpt.

*“When we are asked about disaster budget planning at BPBD, it means three stages, pre-disaster, during and post-disaster.” (AK)*

The complexity of disaster management requires careful, directed, and integrated planning and planning. The countermeasures carried out so far have not been based on systematic and planned steps, so there are often overlaps and there are even important steps that are not addressed. Integrating and aligning the direction of implementing disaster management in a region requires a strong basis for its implementation. This need is answered by disaster risk studies (BNPB, 2023). Disaster risk assessment is an integrated mechanism to provide a comprehensive picture of a region's disaster risk by analyzing the level of threat, level of loss, and regional capacity (Perka Nomor 02 Tahun 2012). A common problem that often occurs is regional readiness in carrying out spatial planning efforts that do not fully consider the potential dangers of disasters that will occur (Haris et al., 2022). Understanding the potential and scale of losses allows disaster management planning and implementation to be more effective and integrated. Thus, disaster risk assessment is an important foundation for ensuring the harmony and effectiveness of disaster management efforts in a region. Therefore, disaster risk studies are used as a basis for disaster budget planning at the pre-disaster stage as stated in the following interview excerpt.

*“In the disaster risk study, what I said earlier is that the disaster-prone areas are the most vulnerable. We have to say that those are where the risk is greatest, so the program intervention is also the most complete. Well, if the area is moderately disaster-prone, then the risk is also medium, then the program intervention is also greater. lower is less than the highest risk, like that. “So, pre-disaster planning and budgeting is a disaster risk assessment.” (AK)*

Asih's statement was reinforced by Sigit regarding the basis used to allocate the budget at the pre-disaster stage, namely using a disaster risk study which will be reviewed every five years.



*“If the main information is the risk study, we compiled the risk study in 2019 and started reviewing the risk studies of the previous 5 years, meaning in 2014, in 2019 we reviewed the results of the risk study and there was a hazard map.” (SN)*

In addition, limited resources cause the budget to have trade-offs, some funds cannot be allocated to one sector without reducing the amount allocated to other areas or increasing the amount of taxes paid by the public. The government can't fulfill the requests of all its stakeholders simultaneously. The government must decide which areas will take precedence or priority. Therefore, the budget is called a political tool because it must decide the priorities and financial needs of the organization. When the situation is normal, the largest budget allocation is at the pre-disaster stage, as shown in the following interview excerpt.

*“BPBD has three types of budgets, sis, the first is called the regular DIPA every year, then the second is called unplanned social assistance, the DIPA has an average of 10 billion, then there is unplanned social assistance, this place is not at BPBD, but at BKAD as the treasurer of Sleman that's the term, it's around 20 billion. Then there is another type that can be accessed by BPBD, called BTT or Unexpected Shopping, which is also located at BKAD, there are around 50 billion. The first three types of DIPA are the pre-disaster proportion, during the disaster, and post there, if the DIPA is the most in pre-disaster, the range is for a population of 10 billion, yes, sis, that's 5 billion for employee salaries and then that's 5 billion for “Disaster management was 2.5 for pre-disaster, there was around 1.8 billion or whatever for now, and after that, the rest was around 700 million.” (AK)*

When a disaster occurs, the largest budget is allocated for emergency management during the disaster. However, after the disaster ended, the budget focus shifted to be greatest in the post-disaster recovery and reconstruction phase as stated by the following informant.

*“For example, in 2010 there was a major eruption, so the dominant one was the emergency response, apart from after the emergency response was completed, it was even bigger after the disaster because it couldn't be postponed any longer, because people's houses had to be rebuilt immediately.” (MW)*

The above phenomenon provides an understanding that appropriate budget allocation is a crucial aspect of disaster budgeting. The characteristics of a disaster budget must be adaptive and responsive to the dynamics of needs that arise as a result of natural disasters, to adapt to disaster emergencies. The flexible budget concept is suitable for disaster conditions.

Apart from disaster risk studies, historical experience in dealing with disasters in the past plays an important role in determining the size of the current budget. In the context of disaster budgeting, historical experience in dealing with disasters in the past determines current and future budget allocations (Savage, 2015). Previous disaster events form the basis for forming current budgeting policies and practices. These experiences are used as a basis for seeing the potential for future disasters. In this way, historical experience is not just a record of the past, but rather becomes a reference for planning disaster budgets that are more effective and efficient and ensure that each region is better prepared to face disaster challenges that arise in the future as revealed from the following interview excerpt..

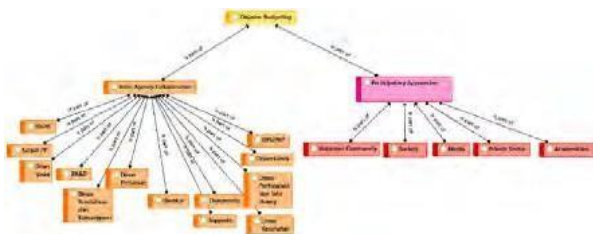
*“If a region experiences more frequent disasters, the budget will be adjusted and that is what differentiates the concerns of each region.” (MW)*

The biggest challenge in planning a disaster budget is estimating potential losses due to a disaster. This can be quite a difficult task due to the large uncertainty and lack of historical data (Rakes et al., 2018). The characteristics of disaster budgets are very distinctive and unique due to the high level of uncertainty (Goodisman, 1983). This is confirmed through the following interview excerpt.

*“Then for planning and budgeting during a disaster, it is based on historical data from the last 10 years, so if we were asked jokingly, “Well, you know, planning for a disaster, people can't predict when a disaster will come?” So, we plan using the latest historical data, for example, this is the picture, sis, for the budget during a disaster for handling hurricanes, how many times have you asked? “Even though we can't plan how many hurricanes will happen, we have data. Oh, it turns out that in the last 10 years, 50 hurricanes occurred in Sleman, so I am planning a budget for this year to handle hurricanes for 50 incidents.” (AK)*

### *Inter-Agency Collaboration and Participatory Approaches Also Play an Important Role in Disaster Budgeting*

Figure 3 presents the results of sub-category data processing of inter-institutional collaboration and participatory approaches which also determine the process of planning the size of the disaster budget.



**Figure 3. Results of data processing in the sub-category of inter-institutional collaboration and participatory approaches**

According to UU/24/2007, implementing disaster management is the responsibility and authority of the government and regional governments, which is carried out in a planned, integrated, coordinated, and comprehensive manner. BPBD has the function of coordinating the implementation of disaster management activities in a planned, integrated, and comprehensive manner. Therefore, BPBD at the district/city level is led by an official at a level below the regent/mayor or echelon IIa level so that he can coordinate other Regional Apparatus Organizations (OPD) in the area whose field of work is related to disaster management. This is confirmed by the following informant's statement.

"Here, the daily operational person is the chief executive, but above him, there is the head of the BPBD and the ex-officio regional secretary." (SN)

Sigit's statement was confirmed and explained in more detail by Budianta as follows.

"Yes, because BPBD's function is actually to coordinate, command, and implement. So, the regional secretary can carry out these 3 functions, Ms. Because he is in command, he who can move the OPD OPD is the regional secretary. But if it's just coordinating, maybe the BPBD chief executive can do it, or the executor. But commanding or coordinating is also carried out

by the regional secretary. When a disaster occurs in a district, the implementing operations controller must be withdrawn to the regional secretary, so that other OPDs follow suit. But if only BPBD then orders it, it won't work. The command system doesn't work." (BD)

Apriyana et al. (2020) show that there is an overlap between budget policy and inter-agency coordination in budget calculations for disaster preparedness funding. The spread of budget allocations across several institutions/agencies makes the budget unfocused and makes it difficult to measure the effectiveness and efficiency of disaster management programs. Disaster budgets are allocated not only to one agency, namely BPBD but also found in other agencies. This is as expressed by the informant in the following interview excerpt.

"Each OPD must prepare a budget related to its duties. For example, when a disaster occurs in Bantul, an emergency budget must be prepared for handling it. The money can then be given to the hospital or set up a field hospital or help with shopping for the health center, that must be there. in each OPD. "Including the social services department, the main function of the social services department is related to refugees, oh they have to have logistical materials, have to prepare tents for refugee camps, and so on, they have to be ready for that." (BD)

"The first is the RPB document, after the risk study, the document that has been prepared is also 5 years old, as an indication of the program of activities in the area of cross-sectoral disasters, not only carried out by BPBD, maybe in the social service, maybe in the health service or agricultural service. " The health department is in the process of preparing medications, while the agriculture department is offering diagnostic services." (SN)

This phenomenon indicates that disaster management efforts are collaborative efforts that require coordination across sectors and institutions. In the context of disasters, disaster management efforts require a common understanding so that alignment emerges on matters related to disasters. Therefore, it is necessary to establish cooperation both internally, namely between sectors within the BPBD, and externally, namely with other OPDs related to disasters, such as the National Disaster

Management Agency (BNPB), the Regional Finance and Assets Agency (BKAD), the Fire Department (BKAD). Fire and Rescue Services), Land and Spatial Planning Service, Communication and Informatics Service (Diskominfo), Education and Culture Service, Public Works Service, Housing and Settlement Areas (DPUPKP), Agriculture Service, Public Housing Service, Settlement Areas and Land (Disperkimta), Social Service, Health Service, Civil Service Police Unit (Satpol PP), Regional Development Planning Agency (Bappeda), and so on. Inter-agency coordination can create an integrated response synergy in dealing with disasters so that disaster management efforts become faster, more efficient, and better organized. Apart from that, support from the government is also very important in building synergy between institutions in disaster management efforts when they occur, as expressed by the informants in the following interview excerpts.

*“If there is an intersection, there is a division of tasks which is still related but it will jump to functional tasks to other OPDs but PU does not do what BPBD does and that is already known. Likewise, BPBD has zoonotic activities, zoonoses are animal diseases that can cause outbreaks. “The minimum service standard is with the BPBD, but the main actors are in the agriculture department.” (AK)*

### **Participatory Approach**

The participatory approach shows that involving local communities and society in the disaster budgeting process improves the suitability of interventions to local needs. Planning a disaster budget requires ongoing dialogue and active involvement from the volunteer community and the communities most affected. This approach ensures that disaster budgets are allocated in a manner that is most appropriate and responsive to the specific needs of the community. This is as expressed by the informants in the following interview excerpts.

*“In each sub-district, we already have a Disaster Risk Reduction Forum. So, this forum in sub-districts accommodates volunteers to take part in handling or reducing disaster risks and also handling emergencies in each sub-district. “Now the FPRB in this village consists of various kinds, not only volunteers but there can be community leaders, PKK, youth organizations, Linmas, there are volunteers*

*who are volunteers, in each sub-district an FPRB has been formed.” (BD)*

*“So, BPBD is indeed a big family, sis. Conceptually, BPBD consists of ASN, and non-ASN, partners, well, these partners are the volunteer community, and the PRB forum is the Disaster Risk Reduction Forum, the contents of which are the vocal points of disaster activists, if the volunteers are indeed average “On average, the difference with BPRB is that, for example, many of the volunteers are mostly operational. If the PRB forum is at the level of the PRB forum concept, usually the same vocal points are made by the university, Ms. Sis entered there.” (AK)* Apart from the volunteer community (FPRB), there is also the involvement of the society, the media, the private sector, and the academician who play an important role in planning the disaster budget, this is called the Penta helix in disaster management as quoted in the following interview.

*“Yes, certainly, the government isn’t the only one making this plan, so it has to be done jointly by the government, as well as society, the press, academics, that’s important too, perhaps for innovation and so on.” (MW)*

### **Budget Limitations Require Alternative Funding Sources for Disaster Budgeting**

Figure 4 presents the results of data processing from the category of budget limitations caused by regulatory inconsistencies and lack of government support so that the disaster budget has not been a priority in the APBD.



**Figure 4. Results of data processing for the budget limitation category.**

Oktari et al. (2017) stated that in terms of budget, BPBD has a very limited budget, only enough to finance regular programs. Perhaps this is related to the role of Bappeda as the main actor in regional budgeting and planning in Indonesia.

Budget limitations are caused by budget not being a priority as expressed by participants as follows.

*“Because it hasn’t been a priority, I’ve said it many times in the Bapeda forum, in finance it’s politics, yes, it’s political, the budget is tug-of-war over the budget, whoever has the strength to pull the budget will have a lot of money.”* (SN)

*“For example, now the priority is not the disaster, but the regional elections.”* (MW)

Apart from the budget not being a priority, there are inconsistencies in regulations (Fischer, 1980; Halac & Yared, 2014; Kane, 2001) that contributed to the limited disaster budget. Putra & Matsuyuki (2019) stated that one of the challenges in disaster management is the inconsistency of regulations which creates difficulties for local governments in building disaster management institutions in the regions. This is revealed by the following informant’s statement.

*“Yes, there is a concept of action which should be based on the same regulations but the action is sometimes different. “For example, UU 24 of 2007, and PP 21 of 2008, all of these have provisions that are regulations under them, there are Minister of Home Affairs both 101 and other regulations related to disasters, it seems that there are still things that are not linear with disaster management.”* (SN)

Considering the budget constraints faced by the government, other alternative sources of disaster funding such as insurance institutions and increasing the role of community social institutions are very helpful. The government needs to build a good system so that individual and organizational donations can reach disaster victims at the right time, place, and to the right people (Madjid, 2018). Therefore, alternative funding sources are needed in disaster budgeting to strengthen financial preparedness in facing disasters. Thus, alternative funding sources are not only considered as a tool to manage disaster budgets more effectively but also as an integral component in building long-term economic resilience to the impacts of disasters. This was conveyed by the informant as follows.

*“If there is a disaster, there is always a solution. If there is no money from the government, then we will*

*get it from someone else. If we use a budget system, the existing planning will not work. The important thing is that the rescue target is achieved.”* (MW)

The government has prepared a Disaster Risk Financing and Insurance Strategy (PARB) or Disaster Risk Financing and Insurance (DRFI) to create a nation and society that is resilient in facing disasters which are expected to be able to meet large financing needs, planned, timely and targeted, sustainable, which is managed transparently to protect state finances. This strategy needs to be supported by strong synergy between the government, private sector, and society in financing disaster risks (Ash-Shidiqqi, 2021). This is by the facts in the field conveyed by the informant as follows.

*“So yesterday there was an incident that resulted in death, from that incident I found out about the news, wow, I was surprised that I wasn’t covered by insurance and then I took part in the evacuation and fell. We are trying to add more. “For next year, if we can have 2000, 2000 people times 12 months, that’s quite Rp200 million.”* (SN)

Apart from insurance, there are also alternative sources of funding, namely CSR programs from the private sector and open donations to the wider community as stated by the following informant.

*“Companies in Sleman whose CSR sometimes contacts us to spend on community volunteers.”* (AK)

*“So, this is gathering volunteers, going out into the community to collect funds, open donations.”* (BD)

Generally, the findings of this study offer valuable insights into the disaster risk, and historical experiences on the perceptions of BPBD apparatus regarding disaster budgeting. By elucidating the underlying structures and meanings inherent in their experiences, this research contributes to a deeper understanding of the complexities of resource allocation in disaster management.

## CONCLUSION

Through a phenomenological inquiry, this study has provided nuanced insights into the

subjective experiences of the BPBD apparatus regarding disaster budgeting. By acknowledging the historical realities of frontline responders, policymakers can develop more responsive and effective strategies for enhancing disaster resilience and mitigating the impact of future disasters.

Based on the perception of BPBD officials in Sleman and Bantul Regencies, the disaster budgeting process at BPBD involves three stages: pre-disaster, during a disaster, and post-disaster. In the pre-disaster stage, budget allocation planning is based on disaster risk studies, while in the post-disaster stage, historical experience in dealing with disasters becomes a reference. Inter-agency collaboration and a participatory approach are key in creating efficient and efficient disaster budgets for the specific needs of disaster-prone areas, such as volcanic eruptions in Sleman Regency and earthquakes in Bantul Regency. The importance of local community involvement in this process is very necessary, especially to overcome budget constraints, which are often not a priority and are hampered by regulatory inconsistencies. Therefore, disaster budgeting requires alternative funding sources, such as disaster insurance, donations, and Corporate Social Responsibility (CSR) from the private sector.

## LIMITATIONS

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This study has several limitations. First, the focus is limited to the perception of BPBD officials

in disaster budgeting, even though many other Regional Apparatus Organizations (OPD) are also involved in disaster budget planning, including the Regional Finance and Assets Agency (BKAD), the Fire Department (Damkar), various related agencies, and Units Civil Service Police (Satpol PP). Second, this study does not include the perceptions of the National Disaster Management Agency (BNPB), as the coordinator at the national level. Third, research has not explored the perceptions of the volunteer community and communities affected by disasters, who are direct beneficiaries of the disaster budget.

## FUTURE SIGNPOSTS

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This study provides several suggestions for the development of further studies. First, it is necessary to expand the unit of analysis to gain a more comprehensive understanding of disaster budgeting in Indonesia. Second, it is important to explore more deeply the most effective disaster budgeting concept for disaster management in Indonesia. Third, future researchers could consider conducting inter-regional or inter-country comparative studies.

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