

Disaster budgeting of Banda Aceh's local government: Trends and analysis of post-tsunami Aceh 2004

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Abstract. This study aimed to analyze Disaster Risk Management (DRM) related funds that budgeted by the government of Banda Aceh. The specific objectives of this study were: i) to assess and analyze the budget allocation related the DRM investment in the government of Banda Aceh, ii) to provide an update on achievements and key trends in DRM investments in government of Banda Aceh, iii) to evaluate the implementation of DRM budget and challenges on mainstreaming with DRM perspectives into policy of local budgeting, and iii) to propose appropriate recommendations for improvement. The study utilized both primary and secondary sources of data to achieve the objective. The method in this study included the following steps: searching/ collecting, checking, compiling, classifying, measuring, accounting and analyzing the existing budget document. The results of the data analysis showed that a large proportion of DRM investments was allocated after 2011. This study recommended some actions to be taken by the government and related stakeholder to increase the quantity and quality of DRM investments.

1. Introduction

Indonesia has witnessed numerous events of natural disasters. Indonesia Disaster Data and Information (*Data dan Informasi Bencana Indonesia/ DIBI*) has reported that between 1990 – 2016, around 9.7 million peoples were displaced as a result of natural disasters, including droughts, tsunami, earthquakes, floods, volcanoes, epidemics and social conflict [1, 2]. DIBI also reported that Aceh has the vulnerability to disasters in almost all regions across it. Not only prone to earthquakes and tsunamis, but Aceh also suffers from floods and landslides. Floods continue to be the most frequent catastrophes occur annually [2].

Banda Aceh, the capital city of Aceh, is also prone to several natural disasters, including flood, earthquake, cyclone and tsunami. During the last major tsunami in the Indian Ocean, Banda Aceh was one the most affected areas hit by the giant wave of 26 December 2004. The massive surge



destroyed around 21.751 unit houses, 169 units of education facilities, 25 units of health facilities, 302 km roads, 63 units of governments offices and 46 social facilities [3].

Considering the fact that Banda Aceh is prone to natural disasters and also was one of the most affected areas during tsunami 2004, greater investments in Disaster Risk Management (DRM) is highly required. The importance of DRM investments has been highlighted in the Sendai Framework for Disaster Risk Reduction (SFDRR) 2015-2030, under the Priority 3. The SFDRR endorses the government and other stakeholders to pay more attention to the DRM investments for resilience [4]. Governments need to invest in DRM to avoid losses and reduce the impacts of a disaster. All development planning should integrate proper disaster resilience measures [5].

2. Purpose

This study aimed to analyze DRM related funds that budgeted by the government of Banda Aceh between 2007 and 2015. The specific objectives of this study were: i) to assess and analyze the budget allocation related the DRM investment in the government of Banda Aceh, ii) to provide an update on achievements and key trends in DRM investments in government of Banda Aceh, iii) to evaluate the implementation of DRM budget and challenges on mainstreaming with DRM perspectives into policy of local budgeting, and iii) to propose an appropriate recommendations for improvement.

3. Methods

The study utilized both primary and secondary sources of data to achieve the objective. The primary sources of data were collected from interviews with key government officials and stakeholders to obtain an insight of disaster budgeting practice, mechanism and its problem and challenges. The secondary sources of data consisted of the annual local government budget (APBD) of Banda Aceh government from 2007 to 2015 and other related documents. The method in this study included the following steps: searching/ collecting, checking, compiling, classifying, measuring, accounting and analyzing the existing budget document.

The classification of the activity in the budget data was reviewed and accounted as DRM investments based on the Government Regulation No. 21 of 2008 on the Implementation of Disaster Management. The study explores two different types of investments: stand-alone DRM investments (such as mitigation, risk assessment, preparedness, early warning, etc.) and mainstreamed or embedded DRM investments in the sector (such as health, education, agriculture, public works, etc.) [7, 8].

4. Findings and Discussion

4.1. Legal and Policy Framework for DRM

Laws and regulations are a necessary foundation for building disaster resilient communities and nations. They are essential to creating an enabling environment for reducing risks posed by natural hazards, preventing new risks from arising and making communities safer [8]. The importance of legal and policy framework to support DRM program has been highlighted in the Hyogo Framework for Action (HFA) 2005-2015 [9]. The SFDRR 2015-2030 has also called for a renewed focus on strengthening legal frameworks for DRM [4].

Indonesia has achieved significant progress on legal frameworks for disaster management, by enacting Disaster Management Law No. 24/ 2007 and several regulations both at national and local level. Indonesian Disaster Management Law No. 24/ 2007 stipulates the importance of integrating DRR into the policy framework of government for all phases of disaster management, including mitigation, preparedness, emergency response and recovery [10].

As shown in Figure 1, Disaster Management system in Indonesia has a comprehensive regulating system which includes laws/ regulation, planning, institution, budgeting, capacity development,

including science and technology, to ensure a well-integrated and coordinated implementation of DRM program [11].

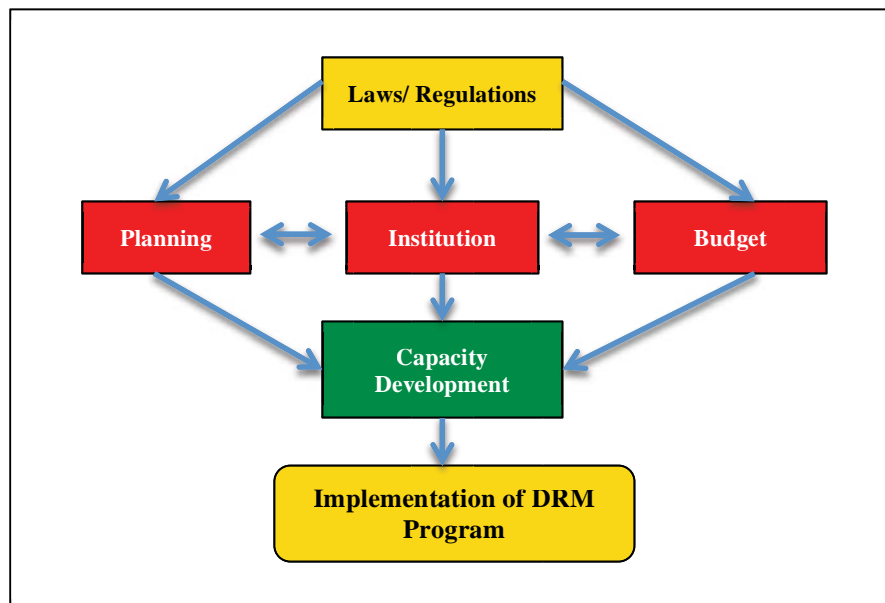


Figure 1. Disaster Management System in Indonesia
(Sources: Adopted from BNPB, 2011)

In order to provide more specific operational detail on the application of the general principles, BNPB currently has more than 80 additional specific regulations. There are also several Ministerial Regulations have been enacted to strengthen DRM measures in Indonesia (please see Table 1).

Table 1. National Regulations to strengthen DRM Measures

No	Regulation	Content
1.	Disaster Management Law No. 24/ 2007	Sets out important legal regulations on disaster management
2.	Government Regulation No. 21/ 2008	Stipulates the implementation of disaster management and the enforcement of Local Action Plan for DRM
3.	Government Regulation No. 22/ 2008	Funding and Management of Disaster Assistance
4.	Government Regulation No. 23/ 2008	Participation of International Institutions and Foreign Non-Government Institutions in Disaster Management
5.	Presidential Regulation No. 8/ 2008	Establishment of BNPB
6.	Ministry of Home Affairs Regulation No. 131/ 2004	Stipulates the disaster management in the Local Level
7.	Ministry of Home Affairs Regulation No. 46/ 2008	States that every region should develop a BPBD and provides manual on tasks, organizational structure, and operations of BPBD
8.	Head of BNPB Regulation No. 3/ 2008	Provides Guidelines for the Establishment of BPBD

(Sources: Extracted from BNPB, 2011)

The local regulations on DRM in Aceh have been established and endorsed by Governor Regulation and Governor Decree as shown in Table 2 below. These regulations provide legal frameworks for the

Provincial Government to implement DRM and make DRM measures as part of development planning instrument. These regulations also provide institutional arrangements, supports the government to manage pre, during and post disaster, and helps to develop better mitigation and preparedness efforts to face future disaster.

Table 2. Local Regulations to strengthen DRM Measures

No	Regulation	Content
1.	Qanun No.5/ 2010 on Disaster Management	Adds important information access and advisory role of the communities in the DRM decision making process
2.	Qanun No.6/ 2010 on the Establishment, Organizational Structure and Management of the BPBA	Provides detail information on the Establishment, Organizational Structure and Management of the Aceh Disaster Management Agency (BPBA)
3.	Governor Regulation No.43/ 2010 on Standard Operating Procedures for Tsunami Early Warning System (TEWS) in Aceh	Equips the government with standard mechanism for increasing tsunami preparedness
4.	Governor Regulation No. 51/ 2011 on Provincial Disaster Management Plan for 2012-2017	Provides more strategic planning for Disaster Management in Aceh
5.	Governor Regulation No.48/2010 on Local Action Plan on DRM for 2010-2012	Provides comprehensive approach to DRM measures in dealing with various hazards in Aceh
6.	Governor Decree No. 360/6a/2011 on the establishment of the DRM Coordination Forum	Provides legal basis for the establishment of DRM forum in the form of multi-stakeholder forum mandated to assist the Government of Aceh in advancing DRM measure
7.	Governor Instruction No. 2/INSTRK/2012 on 28 May 2012	Provides a legal basis to implement DRM curriculum in schools
8.	Qanun of Banda Aceh No. 3/ 2011 on the Establishment, Organizational Structure, and Management of the BPBD Banda Aceh	Provides a legal basis to establish Local Disaster Management Agency (BPBD) in Banda Aceh

(Sources: Extracted from UNDP, 2012)

4.2. National Budget Allocation for DRM

At the national level, total government investment for DRM activities has increased significantly from IDR 2.6 trillion in 2006 to almost IDR 9 trillion in 2011. In fact, the actual DRM investments at the national level are greater since some activities are embedded in other sectoral programs. In the period 2006 to 2012, 75% of DRM investments were allocated for disaster mitigation and prevention activities, followed by disaster preparedness activities (13%) and research, education, and training (6%). Also, a budget classification for stand alone DRM has been developed to facilitate the monitoring of the DRM investments expenditure and outcomes [8,11].

Although most of the central government institution have invested some funding for DRM purposes, the average of DRM investment is less than 1 %, which is still lower than the internationally accepted ratio (1,2% of national budget) [8].

DRM has been integrated into policy framework at the national government level. Policies related to DRM have also been instituted in the Medium Terms and Annual Development Plans (2004-2009

and 2010-2014). However, some Ministries have not included DRM principles in their Strategic Plan or their Annual Working Plan [8].

4.3. Local Government Budget Allocation for DRM

This paper analyzed the budget allocation related to DRM investment in the local government of Banda Aceh between 2007 and 2015. The data was collected from revised budgets of the local government of two departments. Previously, DRM-related program was only found in Office of Development Welfare and Civil Protection (*Badan Kesejahteraan Pembangunan dan Perlindungan Masyarakat/ Kesbanglinmas*). After 2011, the government created Local Disaster Management Agency (*Badan Penanggulangan Bencana Daerah/ BPBD*). This department was originally a fire department.

BPBD Banda Aceh was established in 2011 through Local regulation or Qanun No. 3/ 2011 on the Establishment, Organizational Structure and Management of the BPBD [12,13]. The BPBD organizational structure as shown in Figure 2, support the statement in the Article 24 of Disaster Management Law No.24/ 2007 which stipulates that the local disaster management agency shall carry out the functions during a pre-disaster period, emergency response and post-disaster period [10].

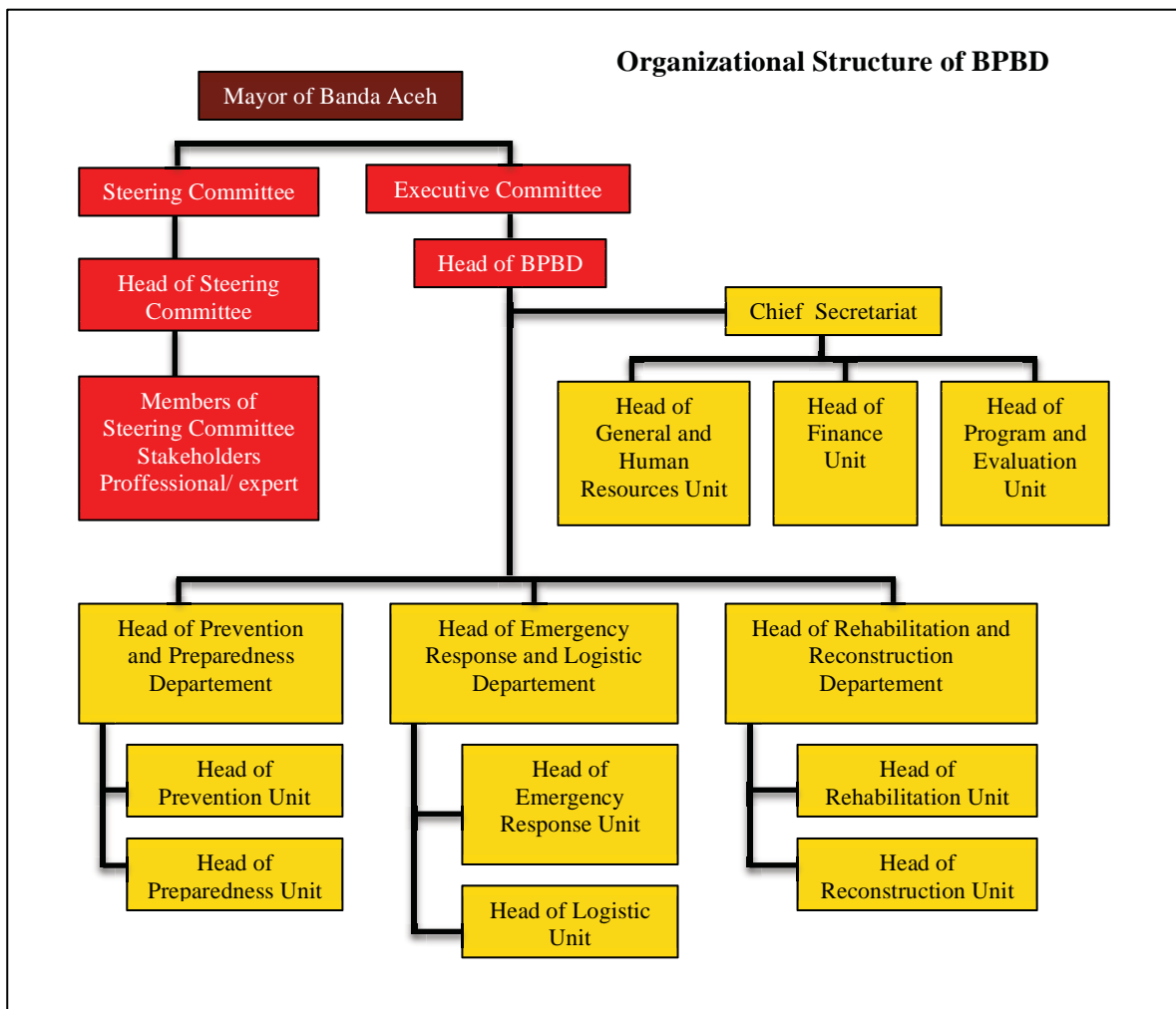


Figure 2. Organizational Structure of BPBD (Sources: Adopted from Qanun No.3/ 2011)

4.4. Budget Allocation related to DRM in Banda Aceh

According to the data analysis shown in Table 3, the budget portion for DRM investment has been relatively very small compared to the total local budget or other department budgets. Before 2011, the DRM related programs were accounted for less than 0.06% of the total government budget. After 2011, the budget for disaster-related programs has not been changing substantially. It accounted not more than 0.60% of the total budget of Banda Aceh.

Table 3. DRM related program allocation as a percentage of the total local government budget

Year	Total Local Government Budget (in IDR)	Total DRM-related Budget (in IDR)	Percentage
2007	532.046.733.984	152.898.000	0.03 %
2008	500.040.754.837	245.544.250	0.05 %
2009	555.362.366.232	188.813.800	0.03 %
2010	589.258.259.907	78.246.200	0.01 %
2011	761.313.118.850	76.667.500	0.01 %
2012	825.234.713.764	1.034.180.976	0.13 %
2013	985.975.685.419	1.518.104.776	0.15 %
2014	1.194.481.738.232	5.226.884.820	0.44 %
2015	1.329.366.899.560	7.871.688.250	0.59 %

(Source: Extracted from APBD of Banda Aceh)

As a percentage of the total budget, the local government funds allocated for DRM amounted only 0.03% in 2007, and increased steadily to the level of 0.59% in 2015 (see Figure 3). Overall, the figure show an increased local government investment in DRM programs and activities.

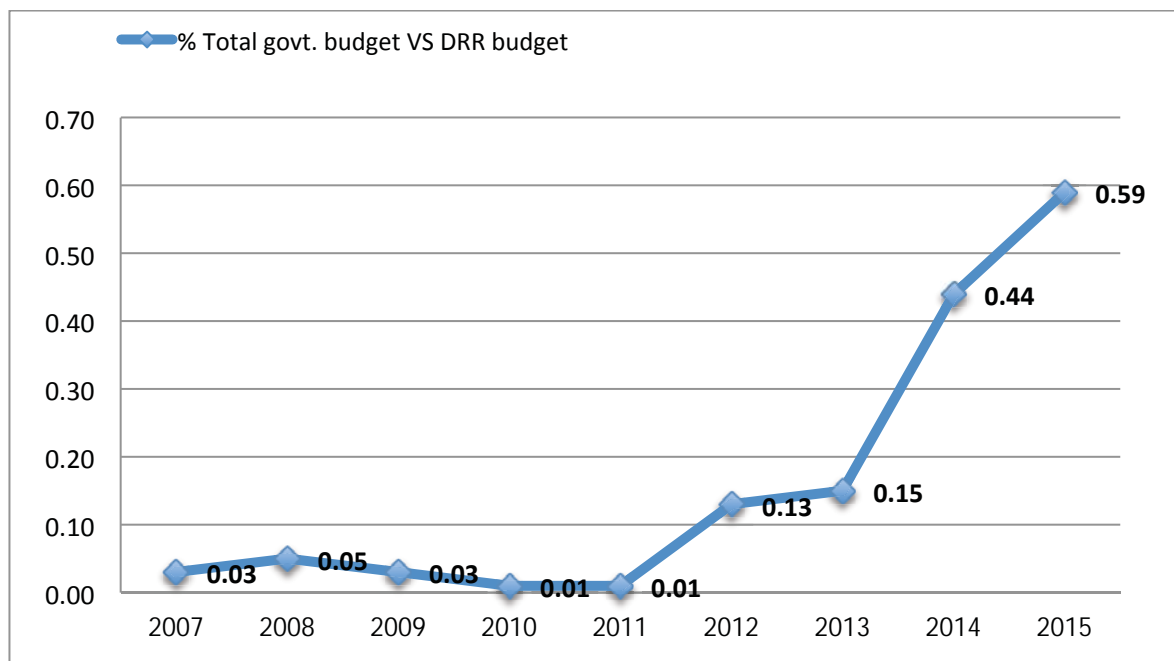


Figure 3. Trend in DRM investments in Banda Aceh
(Sources: Extracted from APBD of Banda Aceh)

However, the DRM-related programs can only be found in *Kesbanglinmas* or BPBD budget as it is one of their core functions/ responsibility. This condition indicated that the disaster budget was allocated only in one department, rather than cross-department. For example, DRM related program was not found in health or education department. Although theoretically, these departments could play a significant role in DRM risk mitigation.

In addition, the DRM-programs that have been proposed were mainly after disaster/ recovery-oriented than preventive. Most of the budgeted program are from the procurement of temporary shelters, evacuation process during a disaster and early warning on disaster for the community. After 2011 (BPBD in charge for DRM program), the government focused more on the fire disaster as BPBD was originally a fire department. In this period, the term 'disaster' in the government budget was related only to fire disaster preparedness and prevention. The term 'disaster' was not found in other departments' budget except in BPBD budget. However, the term 'emergency' and 'extraordinary situation/ catastrophes' can be found in social department. In the social department, there was a program related to disaster e.g. response for emergency and extraordinary situation program. In this program, the social department budgeted IDR 15.000.000 to IDR 17.000.000/ year for procuring clothing for disaster victims.

Through some interviews with key officers in BPBD, insight of disaster budgeting in Banda Aceh government has been obtained. The budgeting mechanism was started from budget request/proposal prepared by each department. These budget request will be collected by local budget preparation team which consist of representatives from Development Planning Agency (Badan Perencanaan dan Pembangunan Daerah/ BAPPEDA) and department of finance. The budgeting team reviewed the budget request of each department before combining and preparing a local budget draft. The local budget draft will be discussed further with the head of government prior to the approval process by the legislative.

Mostly, BPBD received a smaller budget that it is proposed due to the financial constraint of local budget. Indeed, the BPBD approved budget can only be used for equipment maintenance and other routine programs. As a result, BPBD has not conducted any DRM program particularly DRM mitigation program for the last few years. According to the interviewees, most of DRM program that has been implemented were financed by Disaster Management Agency at National and Province level (BNPB and BPBA) or international NGOs. These bodies have more financial sources than the local BPBD. In fact, only few DRM related program that has been implemented after 2004 Tsunami. During the Tsunami recovery period, in fact, it was the NGOs played a vital role on DRM program, not the local government. Thus, the DRM issues and concerns seem failed to penetrate to local government budgeting and other departments so far.

Another issues uncovered is the lack of capacity of the programmer in BPBD. Most of the key officers have no educational background or prior training on disaster science. Consequently, they do not have the required-capacity to propose or create DRM related program particularly in preventing and mitigating DRM risk.

In a nutshell, disaster budgeting in Banda Aceh government is still not a budget-priority. Not only a small number of disaster budget, but also the proposed program is not adequate and appropriate for a region prone to disasters.

5. Conclusions

Disaster is difficult to predict and allocating a speculative amount of money in the budget system may lead to a lower budget's credibility and usefulness [14]. This argument could help us to understand why the government reduces its budget allocation for the disaster-related program. However, the analysis showed that a large proportion of DRM investments was allocated after 2011. The establishment of BPBD of Banda Aceh contributed to the increasing government investment in

disaster management activities. As stipulated by the law, all local governments are required to establish a disaster management agency. After 2011 the figures show an increased budget allocation for DRM, particularly as a stand-alone DRM investment. Indeed, the BPBD approved budget was only be used for equipment maintenance and other routine program. BPBD has not conducted any DRM program particularly DRM mitigation program for the last few years using their own budget.

Investing in DRR yields multiple benefits as it builds a resilient future. It helps avoid losses when disaster strikes. Therefore, decision makers need to prioritize investments to build resilience, although these do not produce immediate benefits. This study provided useful data and highlighted the trends related to resource allocation for DRM investments in Banda Aceh. This study recommended some actions to be taken by the government and related stakeholder to increase the quantity and quality of DRM investments, including: i) capacity development in planning and budgeting for BPBD personnel, ii) formulate a sectoral policy on DRM to be adopted by other sector in the local governments (such as health, education, agriculture, public works, etc.), and iii) strengthen coordination with related to the sectoral institutions.

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