Does Isomorphic Pressure Matter? Indonesia's Policy On Disaster Risk Finance

Agus Sunarya Sulaeman, Acwin Hendra Saputra, I Gede Agus Ariutama

Abstract: The need for disaster risk financing is critical for Indonesian government to be proposed as one of the responses to manage the fact that Indonesia sits on the most active pacific ring of fire where most earthquakes and volcanic eruptions occur. Thus, this study attempted to investigate the isomorphic pressures on Indonesian public organizations from a disaster risk finance perspective. The discussion then becomes important since the government is seen as one of the central institutions responsible to deliver public goods and services, particularly in efforts to mitigate the natural disasters. Issues such as lack of government response, unclear disaster policies, and disaster management miss coordination, the absence of post-disaster management planning to the incompetence human capacity in public sector to handle the disaster became a source of questions on how both central and local governments deal with disaster risk policy. Therefore, it is important to conduct an assessment related to how the government institutionalizes disaster management policies, especially on disaster financing policies that should be reflected through the government's budget alignments to attain public legitimacy, including in disaster risk financing efforts. This study found that the dominating pressure in the disaster management implementation was normative pressure which was specified by the issuance of Law no. 24 of 2007, establishment of InaSAFE, and experience of losses. By knowing the institutional pressure, we gain basic knowledge required to design appropriate responses and strategies to isomorphic pressures to support institutional sustainability, particularly disaster risk finance policy.

Index Terms: Disaster Risk Finance, Disaster Risk Policy, Pooling Funds, Disaster Management, Isomorphic Pressure

1. INTRODUCTION

The geographical condition of Indonesia, which is located between two continents and two oceans, causes Indonesia to have quite good economic potential as well as a disaster-prone region. Indonesia's geological location which is situated on three tectonic plates namely the Eurasian Plate, the Indo-Australian Plate and the Pacific Plate, as well on the ring of fire makes Indonesia rich with mineral reserves and vulnerable to natural disasters such as earthquakes, tsunamis, landslides, and volcanic eruptions. Natural disasters have the potential to create a large or broad impact, particularly when the disasters occur unpredictably so that people are less prepared to deal with these calamities. Based on Law Number 24 Year 2007 concerning Disaster Management, there are at least seven types of natural disasters, namely earthquakes, tsunamis, volcanic eruptions, floods, droughts, hurricanes, and landslides. The occurrence of natural disasters from year to year continues to increase, so that the Government is expected to always be ready, both on disaster management activities and financing. Indonesia is among 35 countries in the world that have a high risk of life and economic losses due to the impact of various types of disasters (Indonesia, 2018). According to Global Facility for Disaster Reduction and Recovery (GFDRR, 2011), over the last 30 years there have been an average of 289 significant natural disasters per year in Indonesia with an average annual death toll of approximately 8,000. In 2018 there were three major disasters hitting Indonesia, earthquake in Lombok and Central Sulawesi, and tsunami in the Sunda Strait which ended with such a large loss. In 2004 Indonesia also seized world attention with an earthquake followed by a tsunami in Aceh and the northern coast of Sumatra. After that, a large-scale earthquake in 2006 devastated Yogyakarta and the surrounding area.

Repeated disasters have a direct impact in the form of fatalities and enormous material losses. For the Aceh and Nias tsunami disasters based on the BNPB report (2019), it was estimated that the loss reached 41.4 trillion rupiah. Furthermore, the Government of Indonesia spends $300 to $500 million annually on post-disaster reconstruction. Costs during major disasters per year reach 0.3 percent of national GDP and as high as 45 percent of GDP at the provincial level. The amount of economic losses that must be borne according to the World Bank has not reflected the overall economic value lost due to limitations in calculation because of the poor database (GFDR, 2011). Therefore, the Government of Indonesia has determined that natural disaster management is a priority agenda by integrating it with the government's fiscal policy.

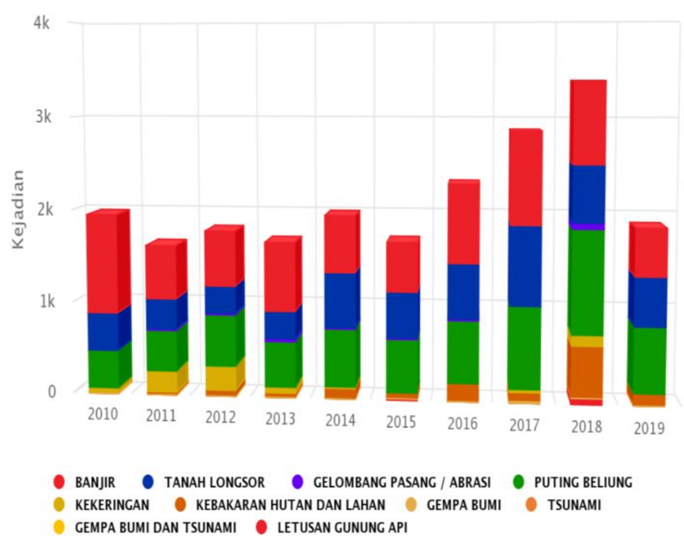

***Figure 1**. Indonesia Natural Disaster Trends 2010 - 2019*
Source: BNPB (2019)

Realizing that the topic of disaster management is a crucial issue, Indonesian government began to study the implementation of disaster management policies in other

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countries as well as explore the issuance of catastrophe bonds. This issue is brought under discussion as disaster management financing cannot be entirely covered by state budget scheme, meaning disaster mitigation and financing other than the state budget is required to be an alternative solution. Insurance is a breakthrough effort to fund disaster prevention in order to provide guarantees of public safety and state assets security. Moreover, the Indonesian government, like other developing countries, still experiences classic problems related to the fiscal gap. Such enormous cost in handling disasters related to disaster management financing includes the funding for periods of no disaster (pre-disaster financing), emergency response financing in the event of a disaster, and rehabilitation and reconstruction financing undertaken after the completion of the emergency response period (post-disaster financing) (BKF, 2018). In addition to covering the cost of disaster impacts, the government also suffered a double loss in the event of a natural disaster having a destructive impact on the public infrastructure built by the government. In other words, the government had to re-allocate special funds for the supply of public goods damaged by the disaster. In the future, losses from the disasters is expected to increase, if mitigation, preparedness and risk transfer efforts are not made. The current financing system for disaster management still focuses on emergency response after a disaster occurs. Whereas the government needs at least three instruments in disaster management, that is 1) Ex-post instruments are sources that do not require advance planning. This includes budget reallocation, domestic & external credit, tax increase, and donor assistance; 2) Ex-ante risk financing instruments require pro-active advance planning and include reserves or calamity funds, budget contingencies, contingent debt facility and risk transfer mechanisms; 3) Risk transfer instruments are instruments through which risk is ceded to a third party, such as traditional insurance and reinsurance, parametric insurance (where insurance pay outs are triggered by pre-defined parameters such as the wind-speed of a hurricane) and Alternative Risk Transfer (ART) instruments such as catastrophe (CAT) bonds (Ghesquiere and Mahul, 2007).

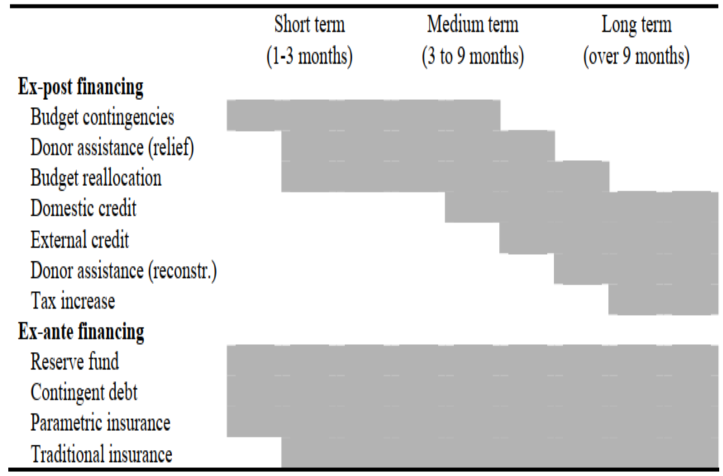


Figure 2. *Source of Post-Disaster Financing*
Source: Ghesquiere and Mahul (2007)

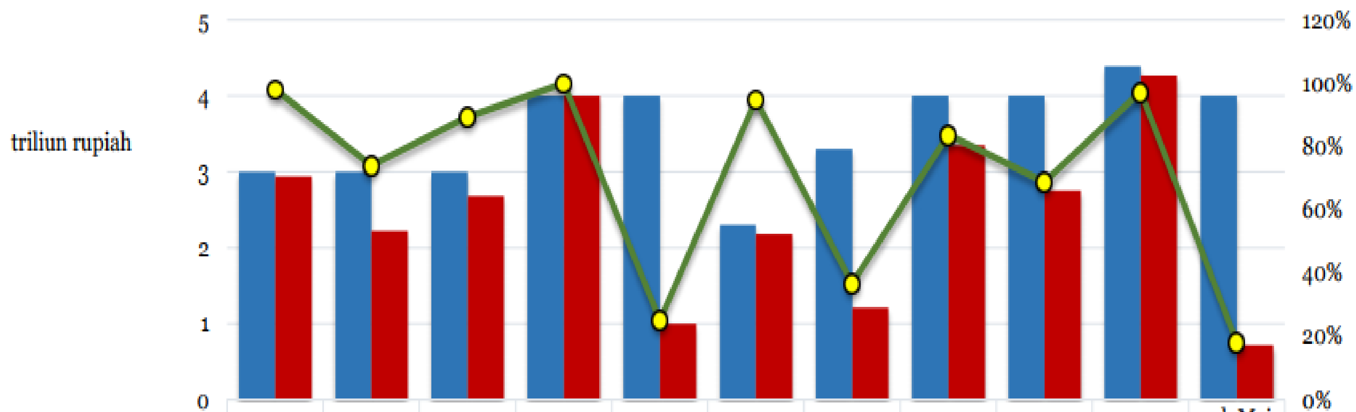
Recognizing the magnitude of the costs of disaster management the Indonesian government as an institution is expected to be able to integrate the pattern of financing disaster management into one unit with its national policy framework. This is important so that disaster mitigation and management efforts can be carried out by all relevant government agencies in accordance with their respective roles and functions. Without efforts to institutionalize disaster management policies at the central government institution level, disaster management will be ineffective. Therefore, the aim of this study is to find out institutional pressures in the implementation of the disaster risk financing and insurance. The purpose of implementing the disaster risk financing and insurance is specifically utilized for the analysis and evaluation of disaster management policies ranging from mitigation, emergency response, rehabilitation and reconstruction. In addition, the purpose of this study is to supplement multidisciplinary research literature related to institutions and disaster risk insurance and financing strategies. It is expected that this study can contribute in the form of suggestions for improvement and development of comprehensive disaster risk insurance and financing.

2. LITERATURE STUDY

2.1. Fiscal Management and Disasters Risk Financing

Even though it has been stated before that the state budget cannot cover all requirements in disaster management, it is important to integrate disaster management in the state budget as a whole. As a prerequisite for this integration is that the government has carried out reforms in the management of its public sector. Pollit and Bouckaert (2004) defined public management reform as the innovation of public sector organizational structures and processes, with the objective of enhancing operational efficiency and effectiveness. This change itself includes reforms in financing policies and disaster risk insurance. The Government of Indonesia itself has adopted the New Public Management with the issuance of a law reform package in the field of state finance in mid-2003 and 2004.

Facing this challenge, the Government needs to reform its disaster risk financing policy in order to increase the resilience of the central government, regional governments and the community in dealing with disasters, as well as increase the ability to build back better in post-disaster recovery. These reforms are carried out to meet the needs of disaster funding in large, timely and targeted, more planned, sustainable and transparent ways to reduce economic losses and the burden on the state budget.



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	s.d. Mei 2018
Alokasi	3,0	3,0	3,0	4,0	4,0	2,3	3,3	4,0	4,0	4,4	4,0
Realisasi	2,9	2,2	2,7	4,0	1,0	2,2	1,2	3,4	2,8	4,3	0,7
% Penyerapan Dana	98%	74%	89%	100%	25%	95%	37%	84%	69%	97%	18%

Figure 3. *Disaster Risk Financing Allocation on State Budget 2008 – 2018*

Source: Financial Note of Indonesian State Budget 2019 (Indonesia, 2018).

The Indonesian State Financial Reform also affected the change in the structure of the APBN from T Account to I Account. This change itself includes reforms in financing policies and disaster risk insurance. The Government of Indonesia is aware that the value of economic losses from major disasters is very high. In fact, the value of the loss, as estimated by the World Bank (Ahmad & Ahmad, 2018; GFDRR, 2011), only represents 60 percent of the actual value of the loss because we can only record the value of the impact of the loss without considering the opportunity cost. The large economic losses are caused by, among others, the quality of infrastructure which is not yet disaster resilient and disaster financing policies that only focus on post-disaster financing. In addition, mitigation and risk transfer policies and instruments are still very limited (pilot projects: agricultural insurance and state property insurance carried out by several local governments). On the other hand, the state budget has limitations in disaster funding. Over the past 12 years, the state budget allocation for the Disaster Reserve Fund is around 4 trillion rupiah per year. Regrettably, in a time when catastrophic disasters did not occur, disaster reserve funds were not utilized optimally (Indonesia, 2018).

This disaster risk financing must also be able to answer funding needs when the catastrophe doesn't occur in the context of mitigating and transferring disaster risk, financing in the event of a disaster (emergency response) and financing after a disaster (rehabilitation and reconstruction). In the process of formulating the strategies and solutions for disaster financing, the Government is aware of several main factors that determine the success of strategic formulation, specifically:

1. Speed in providing financing for natural disasters is important, but not all funds must be given at one time. Therefore, the Government will provide timely and large amounts of funds for each phase: in the event of a disaster, emergency response, recovery and reconstruction.
2. Risk layering and combination of financing instruments because one financing instrument will not be able to be one solution for all disaster risks. The government will determine which risks are financed by themselves (retain) and transferred to other entities, and how to choose the appropriate instrument.
3. Timely distribution of funds and targets is a crucial factor. Thus, collaboration among the central government, local governments and related

stakeholders is needed in ensuring the timeliness and target of the use of natural disaster financing funds.

4. The availability of accurate data and information plays an important role in policy formulation. In this case, the information needed by the Government is an analysis and tool or model to find out the potential for disaster (hazard), vulnerability (exposure), and the impact of loss.

The government then sets priorities for disaster risk financing, where disaster risk financing is aimed at:

1. protect state finances;
2. protect State Property managed by the central government and regional governments;
3. protect all households and communities affected by calamities, especially poor people; and
4. restore the social life of the people affected by the disaster.

Taking into account the above and other regulations and development priorities, the government has created a short-term disaster risk financing road map (2019-2020), aimed at: (1) increasing the scope of financing schemes in order to mitigate and transfer existing risks, including insurance; (2) developing new schemes and alternative schemes for financing disaster risks, both in national, regional and international scope; and (3) educating all stakeholders on the importance of disaster risk management, specifically disaster risk financing (BKF, 2018). For the medium to long term (starting from 2019), the road map is aimed at: (1) developing innovative and sustainable financing instruments using the Government's investment approach in the form of pooling funds; (2) enhancing collaboration between the Central Government, regional governments and the community in financing mitigation and risk transfer; and (3) increasing the depth of financial markets for disaster risk mitigation and transfer needs (BKF, 2018). The source of fiscal risk caused by natural disaster management is insufficient funds / budget allocation for disaster management. Based on Law Number 24 Year 2007, the Government has the responsibility in the implementation of disaster management, including community protection and recovery from disaster impacts, through the allocation of disaster management budget in the APBN (state budget)/APBD (local budget). The budget is used for pre-disaster (disaster risk reduction) activities, during disaster emergency response and post-disaster (rehabilitation and reconstruction) activities. Of the three stages, activities at the post-disaster stage are activities that generally require the greatest amount of funding. Financing at the post-disaster stage (including rehabilitation and/or restoration of public and household infrastructure), where most of the infrastructure lacks financial protection such as insurance, puts a great deal of pressure on government spending (APBN). This is an important concern for the Government to be able to plan and allocate funds for the benefit of disaster management finance rehabilitation and reconstruction activities.

2.2. Institutional Theory

Institutional theory deals with social structure. Institutional theory demonstrates the way the structures specifically schemes, rules, norms and routines become authoritative formations for social behavior (Scott, 2004). Thus, the institution in this case does not only include certain rules, values, habits but also consider the actions that occur and how the actions are repeated or reproduced. Institutional theory in the studies of organization is supplemented by the concept of isomorphism (DiMaggio and Powell, 1983). In this study it was mentioned that the unit of analysis in institutional theory is the organization field, which is a group of organizations that as a whole form an institutional life consisting of major suppliers, customers, regulators or competitors. Then, the organization always wants or is demanded to adjust to its environment. This process is called isomorphism, a process resulting in a unit in the organization field imitating the actions of other units so that the unit is in a more or less similar situation. Isomorphism is related to the institutionalization which is characterized by an ongoing process. In line with this condition, there is a process of institutionalization, de-institutionalization or re-institutionalization (Djamhuri and Mahmudi, 2006). Naturally, the status of institutionalization is only temporary because the organization is again under pressure to carry out the institutionalization in accordance with the demands of the existing changes. So, the process of isomorphism is gradual. Isomorphism arises as a result of various institutional pressures. Furthermore, institutional pressures according to DiMaggio and Powell (1983) can be grouped into three:

1. Coercive pressure

   Coercive pressure causes isomorphism which is a process of adjustment towards similarity by means of coercion. Pressure comes from political influence and the issue of legitimacy. For example, official pressure comes from higher government and organizational regulations to be recognized.

2. Normative pressure

   Normative pressures are often associated with professionalization in certain fields. The norm or something appropriate for an organization comes from formal education and the socialization of formal knowledge in certain fields that support and spread that normative belief. When professionalism increases, normative pressures also increase.

3. Mimetic pressure

Mimetic pressure causes isomorphism which is the process by which organizations mimic other organizations that succeed in one field, even though copycat organizations do not know exactly why they are imitating, not because of encouragement to be more efficient. In institutional studies there is the existence of the term institutional logic. Institutional logic according to Thornton and Ocasio (2008) is a social system of several arrangements concerning practices, assumptions, values, beliefs and rules which people produce and reproduce in time and space and portray them into a meaning in social reality. Institutional logic is the link between individual agents and practices and structure of institutional rules. Institutional logic makes the actors in the organization behave using rational considerations. Other thinkers, Meyer and Rowan (1977) explained that a lot of positions, policies, agenda and arrangements of contemporary organizations are shaped by public opinion, constituents' views, legitimate knowledge through the education system, social prestige, law and court. Thus, this view basically explains that organizational behavior or decisions taken by organizations are influenced by institutions that exist outside the organization. The organization seeks to adapt to external pressure to maintain its existence. Di Maggio and Powell (1983) argued that institutional theory criticized the rationalization of economic theories and contingencies, specifically explaining the structure and function of organizations with efficiency measures. The theory ignores forces outside non-rational organizations such as the state, social norms, traditions, conventions influencing the organizations. Scott (2005) argued that institutions are inside the extent of social constructions and allow symbolic elements, social actions, and material resources. Institutional existence is needed as a set of processes characterized by regulative, normative, and cultural-cognitive elements which is full of change. Although the main elements of the institution are rules, norms, and cultural benefits, the concept of the institution also involves the association of behavior and material resources. Thus, the notion of an institution is determined and characterized by legal, procedural, moral and cultural constraints that have legitimacy. It does not only concern about property or social order, but also a process of institutionalization and de-institutionalization. The existence of external pressure factors becomes a control over the access of actors to various resources, institutions or organizations, which affect performance in various ways. It can be concluded that an institution is a boundary created by a social system that has the power to control and direct interaction between people through formal rules such as laws and laws as well as informal ones such as culture, tradition, and norms where its application will depend on social conditions.

3. RESEARCH METHOD

The purpose of this research is to analyze the factors causing reform on disaster risk financing program in Indonesia by describing inclusive and sequential evidence of the disaster risk financing development including the issues and concerns encircling the transformation. The emphasis of the research is to comprehend the concept and the development of disaster risk financing policy in the Government of Indonesia. Indonesian government including central and local governments as a whole will be used as the unit of analysis. The research employs data from two major sources in order to collect and examine the evidence to validate the development of disaster risk financing, specifically:

1. Accessible information including publications, journals and reports from national and international organizations and state budget.
2. Laws and regulations related to the development of disaster risk financing program.

Laws and regulations are closely scrutinized to improve the knowledge and understanding on the government decisions and policies essential to disaster risk financing. Simply examining laws and regulations to comprehend the information in sequential order, factors causing reform, and important actors will not be comprehensive. Therefore, exploring information which can be accessed by public such as state budget, national and international journals, publications and reports from related organization will also be completed.

4. RESULT AND DISCUSSION

In the process of collecting data, this study exercised information including publications, reports and journal as well as laws and regulations that were used to identify institutional pressures causing isomorphism. Identification of institutional pressures in several documents is related to disaster management that can provide information explicitly or implicitly. Study documentation by collecting data in the form of regulations includes laws, government regulations, finance minister regulations, and director general regulations. In addition to regulations, documents are also collected in the form of official news and publications. In the analysis of the document the writer identifies the relationship between the organization and the pressure that surrounds it in disaster management in Indonesia. In Figure 4, the laws and regulations which have the highest hierarchy are explained.

FIGURE 4

Government Laws and Regulations

Document Name	Linkages with Disaster Risk Financing
Law No. 33 of 2004 on Financial Balance between the Central Government and Local Government	Regulating emergency funds originating from the APBN to be allocated to regions experiencing disasters which are declared as national disasters since it cannot be dealt with by local governments using their local budget.
Law No. 24 Year 2007 on Disaster Management	Providing a brief definition of what is meant by disaster risk and set the stages of the implementation of disaster management which includes pre-disaster, emergency and post-disaster response. The purpose of implementing disaster management in the Act includes the provision of funds and management of disaster relief in the three stages mentioned. This law also becomes the basis for the establishment of the National Disaster Management Agency (BNPB).
Government Regulation No. 21 of 2008 on the Disaster Management	Setting the mechanism for budget allocation and reallocation to meet the needs of disaster financing.
Government Regulation No. 22 of 2008 on Financing and Management of Disaster Assistance	Explaining specific arrangements for financing disaster management.
Government Regulation No. 44 Year 2012 on Emergency Funds	Regulating disaster financing by the Central Government and regional governments, namely the allocation of the state budget provided for reconstruction and rehabilitation after a disaster occurs, including for the recovery of public services carried out by local owned enterprises.
Government Regulation No. 27 Year 2014 concerning Management of State and Regional Property	Declaring regulatory basis for arrangements relating to insurance policies or coverage in the context of securing certain state-owned goods, taking into account the country's financial capabilities.

Ministerial regulations guiding the implementation of disaster management in Indonesia are issued at the level of the relevant ministries as institutions that carry out disaster management and management functions, namely the Ministry of Finance and the Ministry of Home Affairs. Figure 5 describes the link between the implementation of disaster management and regulations at the ministerial level.

TABLE 5.

Ministerial Regulations

Document Name	Linkages with Disaster Risk Financing
Regulation of the Minister of Home Affairs No. 46 of 2008 on the Code of Organization and Working Procedure of the Regional Disaster Management Agency	Explaining about BPBD (Local Disaster Management Agency) funding sourced from the APBD (Local Budget) and the relationship between BPBD and BNPB in disaster

	management activities.
Regulation of the Minister of Finance No. 247 / PMK.06 / 2016 on State Property Insurance	Explaining about arrangement that in the context of securing BMN (state-owned asset) and supporting the smooth functioning of government administration, the Government can insure BMN located in areas prone to natural disasters that will have a major effect on public services if damaged or lost.

There is a chronological lag issue between higher and lower hierarchical laws in terms of the regulations as the basis of the organizations in implementing disaster risk management in Indonesia. First, the issuance of Law number 33 of 2004 concerning Fiscal Balance between the Central Government and Regional Governments only specifically discusses a part of disaster risk management, namely arrangements relating to the provision of emergency funds from the central government originating from the state budget which will be allocated to regions affected by disasters and determined as a national disaster which cannot be managed using funding sources from the local budget. Second, Law No. 24 of 2007 concerning Disaster Management did not refer to the existing Law No. 33/2004. It is verified in the consideration of Law No. 24/2007 which directly refers to Article 20 and Article 21 of the 1945 Constitution of the Republic of Indonesia. Although not directly related, the issuance of Law Number 24 of 2007 fulfills the basic principles of disaster risk management since it regulates the stages of disaster management starting from pre-disaster, during emergency and post-disaster responses including the provision of funds and disaster recovery management at each stage. Law number 24 of 2007 is a milestone in the determination of the Indonesian government in the implementation of disaster risk management because it functions as the basis for the establishment of the National Disaster Management Agency, an institution at the Ministerial level, which is assigned a special task in disaster management. As for the regulations related to disaster management that are issued afterwards are as regulations that strengthen or derivative regulations of Law number 24 of 2007. The source of fiscal risk caused by natural disaster management is insufficient funds/budget allocation for disaster management. Based on Law Number 24 Year 2007, the Government has the responsibility in the implementation of disaster management, including community protection and recovery from disaster impacts, through the allocation of disaster management budget in the APBN/APBD. The budget is utilized for pre-disaster (disaster risk reduction) activities, during disaster emergency response and post-disaster (rehabilitation and reconstruction) activities. Of the three stages, activities at the post-disaster stage are activities that generally require the greatest amount of funding. Financing at the post-disaster stage (including rehabilitation or restoration of public and household infrastructure), where most of the infrastructure lacks financial protection such as insurance, puts a great deal of pressure on government spending (APBN). This is an important concern for the Government to be able to plan and allocate funds for the benefit of disaster management to finance rehabilitation and reconstruction activities. Illustratively, the Aceh / Nias tsunami disaster in 2004 caused damage and losses of more than Rp.41.4 trillion, while losses for the Yogyakarta earthquake in 2006 were more than Rp.26.1 trillion or USD3.1 billion (OECD, 2015). In addition, the total damage and losses caused by the earthquake in Yogyakarta in 2006 were much higher than those caused by the tsunamis in Sri Lanka (2004, USD1.45 billion), India (2001, USD2.6 billion), and Thailand (2004, USD2.2 billion) although with relatively similar earthquake strength. The government issued a budget to finance reconstruction activities of more than Rp. 37.0 trillion for the earthquake and tsunami in Aceh and Nias, and around Rp. 1.6 trillion for the earthquake in Yogyakarta (BKF, 2018). In Indonesia, studies are underway to provide preliminary estimates of future possible public spending linked to disasters. Data on past events, estimated from the number of buildings destroyed and damaged, have been exercised as a basis for simulating possible future spending needs related to natural hazards. Moreover, risk metrics such as Annual Average Loss (AAL) and Probable Maximum Loss (PML) are being calculated. While the annual economic impact of natural disasters is estimated at 0.3% of GDP over the last decade, simulations show that a major earthquake (with a return period of 250 years) could cause losses in excess of USD 30 billion (approximately 3% of GDP) (GFDRR, 2011). Currently there is a paradigm shift in disaster management. Previously, government emphasized more on aspects of emergency response and reactive financing. Whereas, the current paradigm of disaster risk management is to realize development and environmentally sound. Disaster risk management is a combination of technical and scientific sides with a focus on social, economic, and politics in disaster risk reduction planning. It aims to increase the ability of the community to manage and reduce the risk of disasters and the potential loss if a disaster occurs.

4.1. Coercive Pressure

The implementation of disaster risk management in Indonesia is related to various parties both inside and outside the public institutions themselves. Related to identification, occurred coercive pressure comes from other organizations that are higher both from domestic and from abroad. Institutional pressure in the form of coercive is faced by the organization from the initial of the implementation to the current operation. Based on the results of a documentation study conducted, the symptoms of coercive pressure in the implementation of disaster risk management in Indonesia are as follows:

4.2. Mandate of Law number 33 of 2004

Chapter I General Provisions Article 1 number 29 provides the definition of Emergency Funds which are funds originating from the APBN that are allocated to regions that experience national disasters, extraordinary events, and/or solvency crises. Then, further in article 46, affirmation is given that the government allocates Emergency Funds originating from the APBN for urgent needs caused by national disasters and/or extraordinary events which cannot be handled by the Regions by using local budget sources. As for the determination of status “national disasters and/or external events, the ordinary must be established by the President. Article 47 further explains that the Government can allocate Emergency Funds to Regions declared as having experienced solvency crisis. The statement of a solvency crisis must be evaluated by the Government in accordance with statutory regulations and determined by the Government after consultation with the House of Representatives. Article 48 provides a mandate for further provisions in the form of Emergency Funds to be regulated by Government Regulation. It is clear that the mandate of the law puts pressure on the organizations of the Government of Indonesia to have a series of regulations for the operation of Emergency funds for disaster management.

4.3. The adoption of Law 24/07 on Natural Disaster Management

Law 24/07 on Natural Disaster Management emphasizes the importance of disaster risk management. The issuance of this law puts pressure on the Government of Indonesia to have a national action plan for disaster management including the design and implementation of a national disaster risk financing strategy within a three-year time frame.

4.4. World Bank Recommendations Related to the National Disaster Risk Funding Strategy in 2011

This document is an integrated report from the World Bank and as a part of the Global facility for Disaster and recovery and a solution to the request of the Indonesian Government's technical assistance to the World Bank to improve its financial response capacity in the aftermath of natural disasters. Although stated only for consideration, this report has begun to identify the indicative disaster risk financing strategy for Indonesia as indicated in figure 6.

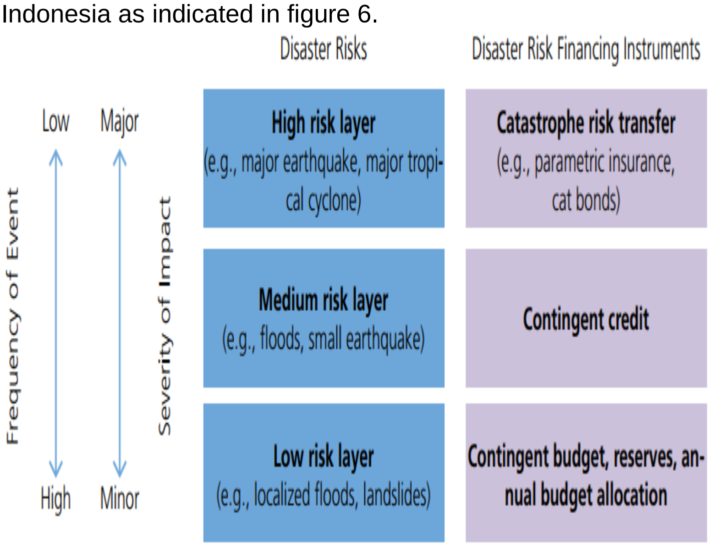


***Figure 6**. Indicative disaster risk financing strategy for Indonesia*
Source: The World Bank Report 2011 (GFDRR, 2011)

Built on the three-tier risk layering approach promoted by the World Bank and the preliminary fiscal risk assessment analysis, the following financial strategy could be considered by the Government of Indonesia (see Figure 6):

- Increasing the annual budget allocation up to US$500 million for post-disaster rehabilitation and reconstruction;
- Securing a contingent credit line of US$500 million;
- Purchasing (parametric) catastrophe risk coverage (e.g., insurance and/or cat bonds) of US$800 million.

In order to carry out the recommendations from the World Bank regarding disaster management, the government of Indonesia has received strong pressure, especially in terms of institutional capacity building so that the recommended scheme can actually be implemented.

4.5. Mimetic Pressure

Institutional mimetic pressure in the implementation of disaster management in Indonesia can be seen in the symptoms of the organization in carrying out a policy or an action to imitate similar practices in other organizations. The actions taken by the organizations indicate a similarity by not considering whether or not the organization needs these actions. Indonesia has almost all types of natural disasters, so it is often referred to as a supermarket for natural disasters. In addition, the frequency of disasters occurrence in Indonesia is high, with an average of more than 2,000 small, medium and large-scale disasters annually. Based on the type and frequency of disasters, Indonesia can only learn partially from the experience of countries that already have national disaster risk financing strategies such as Mexico, the Philippines, Japan and Colombia. Because of the fractional imitation context, an effective and efficient disaster risk financing scheme requires the right combination of instruments and financing policies so that it is not a follow-up scheme that is directly implemented without consideration of internal conditions in Indonesia. In some developed countries, such as New Zealand, which already has a depth of insurance and reinsurance markets and an evenly distributed capacity of risk assessors in each government unit, a multi-policy approach tends to be an appropriate choice. However, for countries such as Indonesia with financial markets that are not yet deep, the use of a single policy scheme can be an option in the short and medium terms.

4.6. Disaster Risk Financing in APEC Economies

Within the structure of knowledge, experience and expertise as well as financial modal quality initiatives, Indonesian government can develop regional and global cooperation's. To enhance various disaster risk management policies, several international initiatives such as APEC Working Group on DRFI, the New Southeast Asia Disaster Risk Financing Facility (SEADRIF) and Understanding Risk Forum can be exercised. In association with international institutions, the Finance Ministers of APEC requested the discussion of knowledge and practices on disaster risk financing schemes among APEC members to clarify relevant innovations and suitable practices. From the discussion among the participants, the survey report, which was prepared by the OECD, Disaster Risk Financing in APEC Economies: Practices and Challenges could be completed. The report was then finalized with the input from APEC members and presented to Finance Ministers of APEC in 2013 (OECD, 2015) The exchange of information between countries that have experienced in handling disasters provides room for mimetic processes. The existing case studies will offer examples and experiences of disaster management that have been applied in various and specific conditions of the countries affected by disasters so that the related parties do not have to start everything from the beginning. Organizational response in facing this institutional pressure is by conducting capacity building, training, short courses, workshops and training. The response is aimed at increasing knowledge and understanding of disaster management methodologies focused on two main points, 1) Risk Assessment and 2) Risk Financing. Organizational approach in implementing the two main points of disaster management is a reaction caused by institutional pressure, particularly mimetic pressure.

4.7. Normative Pressure
The third type of institutional pressure is normative pressure. The symptoms which can be observed in the implementation of disaster management in Indonesia are as follows:

4.8. Enactment of Law 24 of 2007 on Natural Disaster Management
The issuance of Law 24 of 2007 is the foundation of the main regulatory framework for improving disaster management in Indonesia. The responsibilities of the Government of Indonesia in relation to disaster management are regulated in this Act. The arrangement provides clarity for disaster management schemes at the national and regional levels with key government responsibilities including:

a. disaster risk reduction and the integration of disaster risk reduction with development programs;
b. community protection from the effects of disasters;
c. fulfilment guarantee of the people and refugees' rights affected by disasters equally and consistent with minimum service standards;
d. recovery from disaster impacts;
e. the adequate allocation of disaster management budget in the APBN;
f. allocation of disaster management budget in the form of ready-to-use funds; and
g. maintenance of authentic and credible archives/documents from the threat and impact of disasters.

Law 24 of 2007 does not only stipulate a strong mandate for Indonesian government to justify the stages of disaster management but also instruct the government to have a national strategy for disaster management. Through this law, Presidential Regulation No. 8/2008 on the National Disaster Management Agency (BNPB) is mandated. This indicates a serious commitment from the Government of Indonesia in developing legalization, institutions, and financing in the aspect of disaster management.

4.9. World Bank Technical Assistance to the Ministry of Finance and BNPB
The Government of Indonesia through the Ministry of Finance has received assistance from the World Bank in developing national disaster management strategies, especially in the formulation of national financial protection schemes against natural disasters. In addition to the Ministry of Finance, the World Bank also carried out technical assistance on disaster management operations by cooperating with BNPB. The focus of assistance with BNPB is the effort to improve post-disaster assistance funding mechanisms on time. The World Bank's assistance to BNPB also aims to formulate a National Action Plan for Disaster Risk Reduction based on best practices and Indonesia's internal needs. The World Bank's assistance process to the Ministry of Finance and BNPB can be perceived as more of a normative pressure on the Indonesian Government organizations. It is triggered by the diversity of disasters that occurs as well as the frequency of disasters that have caused significant losses to the Government and the people of Indonesia. The pressure to learn from past events for disaster risk reduction is an effort of the Government of Indonesia to be able to formulate a disaster management method/scheme that is most appropriate for the Indonesian context itself despite assistance from international organizations.

4.10. Establishment the Indonesia Scenario Assessment for Emergencies (InaSAFE)
Government of Indonesia-BNPB, Australian Government, the World Bank-GFDRR (Global Facility for Disaster Reduction and Recovery) and autonomous stakeholders jointly established and developed The Indonesia Scenario Assessment for Emergencies (InaSAFE) to advance the knowledge and understanding of the expected impacts of catastrophes such as earthquakes, tsunamis and flood. Moreover, InaSAFE, an innovative threat modelling instrument in Indonesia, is exercised to generate rational calamity scenarios to create contingency planning. InaSAFE, a free open source software, was designed to assist Indonesia and other neighbouring countries to effectively organize disaster management schemes by better comprehending the possible impacts of catastrophes. InaSAFE is a software that allows people with basic computer skills to produce realistic disaster scenarios for emergency planning. It is designed to utilize and combine existing data from scientific organizations, local governments and communities. Generally, information on the citizens and important assets locations are provided by local communities and government departments responsible for each sector. The information is usually distributed through a facilitated component of disaster preparedness and planning exercises. The more the society, researchers and governments reveal the data and knowledge, the more realistic and beneficial the InaSAFE scenario becomes (OECD, 2015).

4.11. Integrating Disaster Risk Management on Indonesian National Planning
The road map in pre-disaster, disaster and post-disaster situations has actually been included in the 2015-2019 National Mid-Term Development Plan and Nawacita. The objectives of disaster management policies in the 2015-2019 RPJMN are mainly to reduce disaster risks and increase the resilience of the central government, local governments and communities in dealing with disasters. The strategies undertaken include reducing disaster risk at the central and regional levels with the introduction, assessment and monitoring of disaster risk through the preparation of risk scale 1: 50,000 studies in regencies and 1: 25,000 scale for cities. The focus of the strategies is on regencies / cities with high risk of disasters occurrence. Moreover, harmonization of policies and regulations on disaster management at the central and regional levels is also executed by the Government of Indonesia. Preparation of contingency plans in high-risk regencies / cities functions as a guide for emergency preparedness and response operations in dealing with disasters.

4.12. Pooling Fund's Formation in 2019 State Budget
The formation of pooling fund was associated with the experience of disasters in recent years. Surprisingly, the government allocated one trillion rupiahs for the first time. The pooling fund is specifically managed for emergency response, mitigation, rehabilitation and reconstruction activities concerning disasters. Pooling Fund itself is an effort to strengthen the role of the 2019 APBN in disaster management efforts. This scheme is a breakthrough in disaster risk

financing policy because of its ability to provide funding for pre-disaster, emergency and post-disaster financing in a sustainable manner. In the institutional context, the formation of pooling funds arises because of normative pressure for better disaster management.

4.13. State-Owned Asset Insurance

Protection of state-owned asset is carried out for all public assets as it is related to the sustainability of public service delivery after the disaster. However, taking into account the fiscal capacity, the priority of protected assets is emphasized on assets and infrastructure that have high economic value and usefulness. They are also associated with community services and economic activities, such as government office buildings, school buildings, hospital buildings, markets, roads, bridges, energy sources, irrigation, drinking water providers, and ports. To facilitate this State-owned Asset insurance, the Government of Indonesia through the Ministry of Finance issued Minister of Finance Regulation (PMK) Number 247 / PMK.06 / 2016 concerning State Owned Asset Insurance. This regulation stipulates that in the context of securing State Owned Asset and in an effort to support the smooth functioning of public services organized by the government, it can provide insurance for State-owned Assets located in areas prone to natural disasters and have disruptive impact on public services if the intended State Owned Asset is damaged or lost. The rule is also in line with the explanation of Article 37 of Law Number 40 of 2014 concerning insurance where the government / financial service authority can provide a consortium / insurance pool for certain risks, such as natural disasters. The issuance of regulations related to State Owned Asset insurance is a part of the mandate of the 2016 Government Regulation on Management of State-Owned Asset and Local-Owned Asset. However, the pressure is more on the goal of guaranteeing the continuity of the government's professional duties so that the public services to the society can be delivered well. This condition can be concluded as a normative pressure on Indonesian government organizations.

5. CONCLUSION, LIMITATIONS, AND CONTRIBUTIONS

The results of the documentation and literature studies which were analysed afterward deduces that the public organizations in general experience institutional pressures by showing symptoms of normative, mimetic, and coercive pressures. The types of institutional pressures dominating the implementation of disaster management in Indonesia are normative and coercive pressures. This dominance indicates that the Government of Indonesia's intention to have a reliable disaster management scheme is more of a normative pressure to have an integrated, modern natural disaster management system. It is mainly designed to be able to predict pre- and post-disaster financing patterns with the main objective of reducing risk from disasters. Normative pressure also dominantly arises from the experience of losses that occurred from the unpreparedness of the disaster management system they have. The issuance of Law number 24 of 2007 concerning Disaster Management is an initial milestone in the disaster management, which is systematic, massive and structured. Establishment of the Indonesia Scenario Assessment for Emergencies (InaSAFE) is also a strong normative pressure towards professionalism in disaster management because it involves the adoption of the latest technology in the field of disaster management for disaster mitigation and impact analysis. Some coercive pressures influencing the implementation of disaster management by the organization do not only focus on funding needs at the Ministry of Finance and BPNP but also concern with further regulatory packages aimed at realizing national disaster management strategies. The strategies include covering disaster management at the central government level and regions in an integrated manner. This research needs further improvement in presenting data and facts in disaster management in Indonesia since it still requires supplementary confirmation from several parties involved in disaster management in Indonesia. Yet, this limitation is expected to be improved in further study by conducting in-depth interviews with policy makers, prominent researchers, and bureaucrats involved in disaster management. In general, this study provides an overview of changes in the disaster management scheme carried out by the Government of Indonesia. By understanding the institutional pressures, the Government of Indonesia will gain basic knowledge required to design appropriate responses and strategies to isomorphic pressures to support institutional sustainability, particularly disaster risk finance policy.

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