



## BUILDING INSTITUTIONAL SYNERGICITY ON DISASTER MANAGEMENT IN ACEH

Hendra Syahputra<sup>1\*</sup>, Aryos Nivada<sup>2</sup>

<sup>1\*</sup>Lecturer at Da'wa and Communication Faculty Islamic University of Ar-Raniry, Kopelma Darussalam, Banda Aceh, Indonesia; <sup>2</sup>Lecturers at Social and Political Science Department Faculty, Syiah Kuala University, Darussalam, Banda Aceh, Indonesia.

Email: <sup>1\*</sup>[hsyahputra@ar-raniry.ac.id](mailto:hsyahputra@ar-raniry.ac.id), <sup>2</sup>[aryosnivada@unsyiah.ac.id](mailto:aryosnivada@unsyiah.ac.id)

Article History: Received on 8<sup>th</sup> April 2020, Revised on 25<sup>th</sup> June 2020, Published on 25<sup>th</sup> July 2020

### Abstract

**Purpose of the study:** This study attempted to discuss and develop concepts for the Aceh Disaster Management Agency (BPBA) to maximize their capacity in performing their function and task in any disaster management activities in Aceh Province.

**Methodology:** In this study, literature reviews and semi-structured interviews were adopted to obtain information regarding the implementation of disaster management in Aceh and the performance of BPBA. In total, there are 26 interviewees, consisting of top management elements in BPBA and its main stakeholders, such as the government of Aceh, research centers, search and rescue team (SAR), the military, etc.

**Main Findings:** This paper revealed that the implementation of disaster management activities in Aceh is still weak especially concerning the management structure of BPBA and coordination that have to be carried out with related stakeholders.

**Applications of this study:** The proposed concepts in this paper are expected to be fruitful inputs for BPBA in performing and synergizing their risk reduction activities with other related parties for a better disaster management implementation in Aceh Province.

**Novelty/Originality of this study:** Even though Aceh is one of the most disaster-prone areas in Indonesia, to the best of the author's knowledge, there are no researchers who discuss and study the importance of building institutional synergy for disaster management so far.

**Keywords:** *Disaster Management, Institutional Synergic, BPBA, Aceh.*

### INTRODUCTION

Aceh had experienced two major events in the past 50 years. After 32 years of long conflict due to a dispute between the Government of Indonesia and the Free Aceh Movement (GAM), Aceh was then devastated by an earthquake and tsunami (Mangkusubroto, 2011). On December 26, 2004, in less than half an hour, a large earthquake followed by a tsunami destroyed mostly coastlines in Aceh. Buildings and infrastructure were collapsed and more than 300,000 lives reported missing. More than ten thousand people lost their parents, children, and relatives. Hundreds of thousands of people lost their homes destroyed by the tsunami.

The earthquake and tsunami became a new history in the life order of the people of Aceh since then. As Aceh had never experienced such a similar event before, thus Aceh did not have a comprehensive and integrated disaster management system that led to a slow disaster emergency response post the catastrophic event. At that time, all the government agencies in affected areas, including at the provincial level, were collapsed, causing chaos against the wheels of government. In April 2005, the state government by established the Aceh-Nias Rehabilitation and Reconstruction Agency (BRR Aceh - Nias), which then, followed by other national and international institutions engaged in disaster issues and programs (Nazara et al. 2007; Rahmayati, 2016; Takim et al., 2018).

The disaster also disrupted the activities of other private institutions which impacted the stagnation of local community economic and social activities. This also indicated the poor state of disaster management at the time where there was no complimentary role between government and private institutions in emergency response efforts. This condition is a result of the absence of an agency to coordinate disaster management activities in Aceh.

The presence of the Aceh Disaster Management Agency (*Badan Penanggulangan Bencana Aceh/BPBA*) five years after the catastrophe has provided a more structured and organized pattern of disaster management activities in Aceh. This body has a coordinating function that is supported by related stakeholders, both government and private, as elements in the implementation of disaster management programs. However, because it is a relatively new institution, many things must be a concern for improvement, from human to services provided.

On the one hand, this agency has not yet been capable enough in managing and performing coordination functions of the overall implementation of disaster management activities in Aceh, but on the other hand, the principles of disaster management emphasize on good cooperation and coordination among related stakeholders. As a result, the agency is not adaptive to the unpredictable situation which often occurs when disaster happens. An adaptive governance approach is

put forward as an alternative method of managing complex social-environmental problems including disasters ([Djalante, 2012](#)).

Based on the above explanation, this paper attempted to discuss and develop concepts for Aceh Disaster Management Agency to maximize their capacity in performing their function and task in any disaster management activities in Aceh Province.

## LITERATURE REVIEW

The Natural disaster has been a new frightening enemy for human civilization in these last two decades. Therefore, this has been a new called for many researchers to think more innovative and integrated approaches for better disaster management. Some researchers discuss livelihood resilience, education, social structure, economy, and politic ([Sina et al., 2019](#); [Shah and Lopes, 2014](#); [Swainson and Mahanty, 2018](#); [Kamil et al., 2020](#); [Ismail et al., 2017](#); [Ismail et al., 2018](#); [Guo and Kapucu, 2017](#)), while others talk about how to cope with and reduce the impact of the disasters through scientific analysis ([Jena et al., 2019](#); [Hamza and Mansson, 2019](#)) and building community awareness and learn from indigenous knowledge ([Syafwina, 2014](#); [Husni et al., 2018](#); [Adiyoso and Kanega, 2013](#); [Kusumasari and Alam, 2012](#)).

Another two important things that used to be linked to disaster management are rehabilitation and reconstruction processes. Rehabilitation and reconstruction are part of the post-disaster response ([von Meding et al., 2016](#); [Farah and Rajib, 2014](#); [Pheng et al., 2006](#)). Rehabilitation includes the recovery of all aspects of public or community services in the affected area to normalize the community life and government services ([Moniruzzaman, 2010](#); [Phelps et al., 2011](#); [Sina, et. al. 2019](#)). Reconstruction covers the rebuilding of all infrastructures and facilities to support the local government and community in re-growing and redeveloping their economic, social, and cultural activities ([Dias et al., 2016](#); [Naithani, 2019](#); [Matsumaru et al., 2012](#)).

Despite, the understanding and awareness about the importance of rehabilitation and reconstruction processes, local government and aid agencies, both local and international, still face serious challenges in providing relief and conducting rehabilitation and reconstruction efforts ([Gore and Fischer, 2014](#)). Geographical, political, economic, and social conditions, governance and legislation, coordination among stakeholders ([Oloruntoba, 2005](#); [Ophiyandri, 2011](#)) are the dominant factors that are often a barrier for the implementation of the activities. However, in some post-disaster recovery cases, those efforts have been proven to make better and more integrated disaster management ([Matsuura and Razak, 2019](#); [Dewi et al., 2019](#); [Mannakkara and Wilkinson, 2013](#)).

Therefore, nowadays, some researchers also become interested in discussing the capability of the government in managing the disaster. The capability includes human resource management, financial support, institution function, policy, and leadership. A strong institution cannot be separated from a well-managed human resource, financial support, institution function, and policy for effective bureaucracy ([Takeda and Helms, 2006](#)). While leadership determined by the quality of leaders in making quick and appropriate decisions as well as directing the institution to play an important role in management activities ([Kusumasari and Alam, 2012](#)).

## A BRIEF OVERVIEW OF DISASTER MANAGEMENT EFFORTS IN ACEH

### 2004 Earthquake and Tsunami: An Awareness Trigger

Aceh is one of the most prone provinces to the earthquake disaster in Indonesia. This is because the province is located in Sumatera Island which is laid on the border of two active tectonic plates, i.e. the Indo-Australian and the Eurasian that extends from the Andaman to the south of Java.

Besides, there is also a Semangko Fault or commonly known as Sumatran Fault that extends along the Bukit Barisan channel which divides the island into the north part and south part. The fault area is currently known to be actively moving that causing frequent earthquakes ([Syahputra, 2018](#)). The fault illustrates the position of the Sumatra fault and the years of the earthquake along with the earth's plates.

The 2004 earthquake and tsunami had swept away almost all buildings along the 800 kilometers of Aceh coastlines ([Nurhasim, 2017](#)). Hundreds of office buildings and thousands of vehicles of various government and non-government organizations were wrecked. The calamity left behind great devastation to people's economic and social life as well as public service activities.

The event may have destroyed many physical and non-physical aspects especially in Aceh, but basically, the event has provided great lessons as well as raised public awareness about the importance of pre-disaster preparedness. Moreover, the tragedy had also given a great impact on the peace talks between Indonesia Government and Free Aceh Movement (GAM) on their decades-long conflict which finally resulted in peace agreement ([Gaillard et al., 2008](#)).

At the state level, the government had taken many actions in response to the calamity, from establishing BRR Aceh-Nias soon after the event until issuing various regulations related to disaster management, such as Law Number 24 Year 2007 concerning Disaster Management and Presidential Regulation Number 8 Year 2008 concerning the establishment of National Disaster Management Agency (Badan Nasional Penanggulangan Bencana/BNPB).

Now, almost fifteen years after the disaster, Aceh has already recovered from such a heartbreaking event. The community has also better prepared now as their awareness and knowledge about ins and outs of disaster and its risk reduction are continue to grow.

### **Indonesia Government Response to Disasters in Aceh**

In response to 2004 earthquake and tsunami, the Government of Indonesia implemented their actions in three main phases, namely: (1) emergency rescue and relief operations; (2) rehabilitation and reconstruction of both physical and non-physical infrastructure; and (3) recovery of economy aspect and government system.

On April 16, 2005, the central government set up the Agency for Rehabilitation and Reconstruction Aceh and Nias (known as BRR Aceh – Nias) through a Regulation in Lieu of a Law (Perpu) No. 2/2005 issued by the President of the Republic of Indonesia as an effort to overcome the chaotic in the distribution of post-tsunami aid in Aceh and Nias. Initially, it was established as a coordinating agency that ensures transparency, accountability, and speed in the reconstruction of Aceh and Nias.

In the same year, the central government also issued a Presidential Regulation Number 83 Year 2005 concerning the National Coordinating Board for Disaster Management (commonly known as Bakornas PB). This body has a coordinating function that is supported by the related stakeholders as the elements of disaster management.

In the following years, the central government becomes more serious in developing legalization, institutions, and budgeting for disaster management. In 2007, the government issued the Law Number 24 Year 2007 concerning Disaster Management. A year later, the Government also issued a Presidential Regulation Number 8 Year 2008 concerning the National Disaster Management Agency (BNPB) ([Kusumasari and Alam, 2012](#)). BNPB has the function of coordinating the implementation of disaster management activities in a planned, integrated, and comprehensive manner. After the establishment of BNPB, Bakornas PB was dissolved.

### **Disaster Management Implementation in Aceh**

The implementation of disaster management in Aceh has now moved to follow the national disaster management system by changing the perspective from emergency response to disaster risk reduction efforts.

This was marked by the inclusion of disaster risk management and reduction program as one of Aceh's development agenda within the period of 2007 to 2012, although the implementation was not following the Hyogo Framework for Action/HFA Action Framework 2005-2015. The local government also established the Aceh Disaster Management Agency that carries out tasks and functions for the implementation of disaster management activities in Aceh. BPBA also coordinates and cooperates with the District/City Disaster Management Agency (BPBD) in maximizing the disaster management effort at a lower level.

Although many attempts have been made to enhance the level of community preparedness for disasters, the community seems to be ambiguous and panicked when a disaster occurs.

### **Aceh Disaster Management Agency**

Even though many subsequent disasters happened after the 2004 earthquake and tsunami, a disaster coordination agency has just established almost six years later.

Aceh Disaster Management Agency or commonly abbreviated as BPBA was established on June 22, 2010, through Aceh Qanun Number 6 Year 2010 concerning the Establishment of the Organizational Structure and Work Procedures of the Aceh Disaster Management Agency. This was part of the implementation of the Helsinki Memorandum of Understanding (MoU) on August 15, 2005, Provincial Law Number 11 Year 2006 concerning Aceh Government in particular article 10 and article 100, and Law Number 24 of 2007 concerning Disaster Management namely article 18, article 19 and article 25 and Aceh Qanun Number 5 of 2010 concerning Disaster Management.

By the above explanation, the implementation of disaster management in Aceh has now moved to follow the national disaster management system. Changes in the perspective of disaster management from responsive emergency towards disaster risk reduction have already begun. This is indicated by the inclusion of disaster risk management and reduction as one of the Aceh development agendas for 2007-2012 in the Aceh midterm development plan (RPJM Aceh) for the same period, although the implementation is not in line with the Hyogo Framework for Action / HFA Action Framework 2005-2015.

BPBA is a working instrument for the Aceh Government that was formed to carry out its tasks and functions in the context of disaster management in Aceh.

### **Political Concerns and Government Policy**

In many countries in the world, political concerns have a great influence on any policies issued by the governments. Therefore, in many cases, lots of government policies are made based on the interests of a group of people or parties



who have more political power, particularly those related to the placement of relevant officials who sit in leadership chairs.

Such the political circumstances also take place in the Aceh Government, even after the conflict resolved and the post-2004 earthquake and tsunami rebuilding program settled. Changes in official positions are commonplace that led to inefficient governance of related institutions, no exception for BPBA.

This can be an indication that the government has given less attention to disaster risk reduction issues. Several leadership transformations had been made during nine years of its establishment. Consequently, implementations of program processes are interrupted. Many policies also changed later. This ultimately contributes to the overall organizational performance which often weakens organization capability.

Disaster management is a coordinated activity among parties involved in various disaster risk reduction and emergency response efforts. Therefore, often unpredictable policy changes will only hamper the processes of creating more community resilience to disasters. Thus, the government is expected to have more consideration in carrying out bureaucratic transformation in such important institutions like BPBA.

## METHODOLOGY

The methodology used in this research was divided into two steps:

### 1. Review of literature

A review of the literature was conducted to gain information about institutional role and performance. In this step, we collected the literature related to the topic from various sources, such as scientific articles or journals, newspapers, as well as the internet.

### 2. Semi-structured interview

A semi-structured interview was conducted by involving top management elements in BPBA and its main stakeholders, such as the government of Aceh, research centers, and search and rescue teams (SAR), the military, etc. There are 26 interviewees in total. The interview was conducted directly and indirectly through questionnaires and informal communication through email, telephone, etc.

## DISCUSSION OF PROPOSED CONCEPTS

### Implementing Natural Leadership Model (Dennis, 2014)

After it was established in 2010, BPBA underwent a rapid change of leader position. Once, there had been two leader changes in a year. This institution experiences extreme and rapid conditions of leadership transformation. This circumstance leads to the retardation of completing tasks and the mandate of the institution's vision and mission. Therefore, BPBA should have a natural leadership model in dealing with such unpredictable organizational environment situations.

Conventional leadership model, the currently implemented model, has many advantages, but becomes less effective when it enters the "decade of transformation". While in the future, an organization is required to be nimble, adaptive, fluid, flexible, responsive, and resilient. Therefore we need a new leadership model with full capacity within a diversity of workforce and networks value that is formed through a period of rapid and unpredictable change.

On the other hand, natural leadership models are formed by utilizing natural life as inspiration and models in coping with the rapid change in an organization. The model provides strategies and solutions to similar problems in the life of natural ecosystems.

The future organizations will develop with relatively limited resources and can experience large sudden shocks (unpredictable) similarly as happened to nature. The organization, like BPBA, should operate within a dynamic framework of five components, namely: Reality, Reality Check, Real Goals, People, and Action. We can use this framework to compare the inspiration that can be drawn from natural leadership models compared to conventional leadership, as shown in Table 1 below.

**Table 1:** Framework for leading component organization format R-RC-GR-P-A

No.	Framework for leading component organization	
1	Reality	Reality is the environment, conditions, and parameters that apply where the organization operates. This also includes all influences originating from outside the organization including technological developments, socio-economic-political trends, availability of resources, and nature itself.  Conventional leaders thinking that they can limit assumptions and ignore the complexity, interconnectivity, and changes that occur around them. They tend to have incomplete or inaccurate views of reality that make them vulnerable to interference and cannot take

		<p>advantage of arisen opportunities.</p> <p>Natural leaders will try to continue to understand, respond to, and harmonize the reality of the relationship between human systems and nature. Natural leadership recognizes the complexity of systems that are not easy to understand. However, they also found that nature provides various models of success stories to understand and utilize complex and dynamic systems through which businesses can operate.</p>
2	Reality check	<p>Leaders just like organisms that can adapt to nature and can survive by constantly checking how they can react to the changing realities around them. Recognizing and aligning with the reality in which we operate, is not only necessary for survival but also to create a dynamic and innovative business organization that is resilient.</p> <p>Conventional leader thinking often only has one reality, namely profit. They will measure everything only in terms of money, and this value is what they measure, ignoring the other side, which they call "externalities".</p> <p>The natural leaders will constantly check how well they are performing and be able to harmonize with the reality in which they operate by imposing a continuous feedback loop. Given the above reality, it has enabled leaders to respond and adapt to change, recover quickly from an unexpected disturbance, to seize opportunities that arise.</p>
3	Real Goal	<p>Objectives are what the organization chooses to work on. Real goals should reflect a more complete understanding of reality and the unique values of the organization. Tangible goals must be able to overcome risks and create opportunities from dynamic reality.</p> <p>Conventional leaders are shaped by conventional sets of thought as an incomplete understanding of reality and about what they can achieve, where they believe that all challenges can be faced. Their main goal - usually only a single goal - is to maximize profits, especially in the short term. Setting their goals is usually done through a closed top-down process. Presumably such an approach - it will be difficult or even impossible - can lead to a strong innovative sustainable business.</p> <p>The natural leaders will set goals openly and collectively based on a complete understanding of dynamic reality, which is looking for what is truly suitable to be used as a goal and what is most likely. Real goals are based on pure vision, not tainted by perceived limitations with what is currently considered possible. The real aim of the organization is to strive to optimize the potential of its resources for business, the business ecosystem, the community, and natural ecosystems. Leaders who are inspired by nature will not focus on analyzing and solving problems that are perceived as mere challenges, but rather focus on knowing a truly good display and choosing the best way to move toward positive results.</p>
4	People	<p>People are at the core of every business, it can be an internal or external organizational HR, including shareholders and stakeholders, suppliers, consumers, the communities in which each business operates, and everyone who impacts.</p> <p>Conventional leaders thinking, perhaps their minds are only fixated to fill the organizational chart, how to exploit the maximum results of the available human resources through the management and technical leadership, and maintain good people through wage increases, status, and position structure. Humans are only seen as job descriptions, where mistakes and failures can be punished. Their job is to minimize costs and expand market share. People must be led, controlled, and managed. Leaders think of themselves as teachers, supreme and heroes. Whereas natural leadership encourages and utilizes diversity, redundancy, feedback circles, allowing free energy, self-organized, and optimizing rather than maximizing. Natural leaders create conditions for optimizing the unique capacities of each person, fostering and increasing diversity, redundancy, and feedback circles in the collective workforce. Relationships with the workforce, customers, shareholders, stakeholders, and the expanded business ecosystem are based on synergies designed to create abundance and resilience. The leader is the host (host), caregivers, facilitators, catalysts, and listeners.</p>
5	Action	<p>Action is the realization of goals. In action, including business processes, products, interactions, which affect the human system, reality, and nature, the place where the organization operates.</p> <p>Conventional leaders thinking are forces driven by risk-based profits which are naturally limited in innovation and difficult to make sustainable efforts.</p> <p>Natural leaders recognize various ways of interacting with humans and natural systems at the same time can take harmonious actions by supporting and utilizing both. As such, their actions</p>

---

going forward will always move towards positive results, both individually, organizationally, and collectively. They can act simultaneously, both for their benefit and support the people and systems in which they operate.

---

To adapt to the demand of future organizations the leaders have to change their rigid metaphor words that have negative connotations to more straightforward words with positive connotations, thus the words can influence the way the employees think and act and enhance their performance (Yuan et al., 2000). Therefore, leaders can change their leadership culture that starts from changing the language (the way they communicate). They can use new metaphors from nature that can inspire meaningful thought, and not reduce thought.

### **Improving the Post-Disaster Funding Scheme**

In the rehabilitation and reconstruction action plan it is necessary to plan funding sources to finance activities in the planned in the framework. The source of funding needs to be supplemented with procedures/schemes from funding to create agreement and understanding from actors and the community about the implementation mechanism of post-disaster rehabilitation and reconstruction. Sources of funding in the implementation of rehabilitation and reconstruction come from two types of funding sources, namely the government and non-government (Mangkusubroto, 2011; Nazara et al., 2007).

#### ***Government Funding***

Government funding is divided into three types of funding tailored to the disaster occurred. The funding sources include (i) APBN for national scale disasters, (ii) Provincial APBD for provincial scale disasters, (iii) District/City APBD for district/city scale disasters. However, the district/city government may request funding assistance from the provincial or central government in the context of funding assistance for the implementation of rehabilitation and reconstruction in its area.

The funding mechanism for the implementation of rehabilitation and reconstruction refers to Law Number 17 Year 2003 concerning State Finances and Law Number 1 Year 2004 concerning Treasury (Kent and Affiat, 2017). It was stated that within the framework of managing situation of a disaster, there are several steps needed to accelerate the distribution of funds i.e.: (i) acceleration of administrative completion of budget documents, both in terms of budget preparation and budget revision, (ii) acceleration of payments through the State Treasury Service Office (KPPN), (iii) the acceleration of the budget approval process in the legislative body, (iv) the acceleration of procedures and time for procurement of goods and services.

#### ***Non-Government Funding***

The implementation of post-disaster management can also be sourced from non-government institutions such as donors, NGOs, the private sector, non-government organizations, and other countries (Chang et al., 2012). Donations or loans originating from non-government funds need to be facilitated for a clear administrative system. NGOs, the private sector, non-governmental organizations can finance rehabilitation and reconstruction activities through direct assistance to specific sectors deemed a priority by the community. Direct assistance can be coordinated with the government so that it can be conditioned and coordinated with other assistance. Whereas for assistance from abroad, administrative procedures can be applied following the Government Regulation Number 2 Year 2006 concerning procedures for procuring loans and/or receiving grants as well as forwarding foreign loans and/or grants.

In Government Regulation Number 2 Year 2006 there is a policy to speed up the process of administering grants or loans. Below are the steps needed to accelerate the process of channel the grants or loan funds:

- Donors make an agreement document such as a Memorandum of understanding (MoU) after the estimated funding needs are obtained.
- Implementation of funded activities can be carried out directly by the donor or managed by the government.
- The agreement document that underlies the implementation of the activity is recorded by the finance department and copied to the National Development Agency (BAPPENAS) and cabinet secretariat.
- For the procurement of imported goods, permission from the finance department with a recommendation from the state secretariat must be obtained.

#### ***Enhancing Business Sector's Role in DRR***

Disaster risk reduction is a multi-sector "business", not only the government. The business sector itself has several adequate resources in handling disasters. However, efforts related to disaster management by the private sector are currently scattered and their mutual coordination is less optimal. Therefore, businesses are encouraged to work together in disaster management to synergize resource mobilization.

The business institution is one of the disaster management pillars in Indonesia. The involvement of business institutions is regulated in the Head of BNPB Regulation Number 12 Year 2014 concerning the Participation of Business Institutions

in Disaster Management. The regulation appears as a mandate from Law Number 24 Year 2007 concerning Disaster Management. The role of the private sector with owned resources needs to be encouraged, apart from donations, the private sector is expected to strengthen disaster prevention programs. (Dalidjo, 2019; Takim et al., 2018).

Funding Scheme in Rehabilitation and Reconstruction Action			
Regulation of Head of BNPB Number 17 Year 2010 concerning the main funding source for rehab & recons implementation:		Other allowed resource:	
District/city APBD for district/city disaster scale	Provincial APBD for provincial disaster scale	Insurance	Bilateral and multilateral funding
APBN for national disaster scale		The trust fund for disaster management	Other community funding

**Figure 1:** Funding Scheme in Rehabilitation and Reconstruction Action (Bappeda, 2005)

### Corporate Social Responsibility (CSR)

Because the role of a business institution is very significant in disaster management activities in Indonesia, consequently, a large number of companies are involved in this area. They often use corporate social responsibility (CSR) programs to alleviate the suffering of people affected by disaster events. The frequency of major catastrophic events that are currently increasing also affects the business world. As a result of the disaster, the private sector was also affected.

In a normal situation, CSR activity is usually defined as a corporate strategy to minimize negative impacts and maximize positive impacts for its stakeholders. While in a disaster situation, companies can see it as a need to maximize the positive impact of their presence on disaster-affected people who need immediate help.

From a theoretical point of view, the relationship between companies and the community is usually marked by more attention to vulnerable groups of people. The most comprehensive CSR standard, ISO 26000 Guidance on Social Responsibility, lists many expectations regarding this vulnerable group in the Seven Core Subject, Community Engagement, and Development (Hahn, 2013). The source of vulnerability can be structural, cultural, or personal (Ife, 2001). Among personal causes is a disaster situation. Therefore, giving attention to those who are experiencing disasters is inherent in CSR.

However, CSR is primarily aimed at corporate stakeholders - those who can influence and be affected by the achievement of company goals – who experience a disaster. In this case, the main stakeholders of the company, for example, are the workers themselves, their customers, and the people who live in or near the company's operational areas.

Apart from its conceptual, institutional, and strategic developments, CSR is known to be a relatively effective concept used in some disaster-prone countries. CSR is a commitment to behave responsibly to minimize the harmful effects of companies and manage their affairs by maximizing the benefits for all stakeholders. Global CSR has become an integral part of company affairs. CSR plays a very strong role in transforming traditional "profit-driven corporations" into stakeholder-oriented entities.

Company-led globalization, technological innovation, and business internationalization also require and influence this transition. Investment in CSR has long been seen as an efficient strategy to promote corporate profits in developed countries.

CSR includes legal, economic, ethical, and philanthropic obligations to promote employees, social and environmental needs, and stakeholder values. Different responsibilities formulated by law and ethics overlap and legal obligations are often included in the broader concept of ethical obligations depending on different socio-economic and legal factors in various countries. Providing a safe and appropriate work environment, for example, has become a legal obligation in developed jurisdictions, while most remain an ethical responsibility in developing countries.

### Philanthropic Activities

Private sectors are now required to change their paradigm in disaster management. They must be encouraged not only to contribute through charity assistance but also to build values about the disaster in an organizational system. A business forum should be formed to improve synergy and coordination in disaster management in Aceh. Therefore, it is necessary to increase their capacity in disaster preparedness as well as to protect their businesses and employees (Dalidjo, 2019).

The involvement of the private sector indeed needs to be built on. This is nothing new and has started to be initiated by many business actors, especially multinational companies, in seeing it as an opportunity. In Indonesia, many of these platforms appear in philanthropic format. Many companies later established a foundation. One of the goals is to play a role and their involvement in disaster events, starting from before, during, and after a disaster occurs.

Pre-disaster activities included: encouraging business continuity plans and work, empowering the surrounding community through capacity building, strive for disaster prevention, carry out structural mitigation, and build cooperation with various parties. While in the time of a disaster, the activities among others: seeks to save labor, and company assets; respond to emergency response; and mobilizing assistance, be it the mobilization of resources, volunteers, and supporting equipment or infrastructure. Post-disaster activities included: creating an action plan and implementation for rehabilitation and reconstruction.

**Innovative Core Business (Izumi and Shaw, 2015)** Another business role in disaster management can be in the form of creating innovative products as part of the business (innovative core business). The company began to innovate in modern research and technology to bring mass and commercial products related to disasters. This is indeed not popular in Indonesia, but it has become mainstream for many developed countries with relatively large potential disasters, such as Japan. Many companies in Japan have a core business that is engaged in disasters. They consider that disasters are also part of business opportunities, for example: by providing various anti-earthquake building materials or materials for disaster-friendly products.

Sometimes, such efforts or initiatives initiated by certain companies receive negative responses from other related parties, including the government. On the contrary, in a specific situation, the government receives less response from the private sector, likewise other parties, such as civil society, media, and academics. There is a gap that appears in this problem.

The common challenges faces by private sectors are in regard to unsupportive systems and/or regulations that discourage and hinder the undertaken efforts or initiatives. Besides, the regulation still unable to accommodate the need for practical tools that provides references to adapt it to the Indonesian context. This situation also led to a less inspiring climate for the business sector in Indonesia to engage more deeply in disaster risk reduction activities. Meanwhile, most of the public sector actors themselves also tend to concentrate on an egocentric work model that inhibits the coordination process among business institutions.

Despite such complex challenges mentioned above, some business institutions continue to move forward and contribute to the development of people's awareness of disasters. While some others, of course, need to be encouraged. Therefore, it is necessary to bring together those institutions to discuss the importance of their involvement and strong coordination among them in disaster risk reduction efforts.

Moreover, to provide more open and broad participation, the institutions also have to be encouraged in the development of strategies for models or tools and the formulation of related policies so that it can accommodate their necessities.

## CONCLUSION

Several conclusions can be summarized from this study, i.e.:

- Aceh is one of the most prone provinces to the earthquake disaster in Indonesia due to its location in the meeting of two active tectonic plates, i.e. the Indo-Australian and the Eurasian, and above an active fault, known as Sumatran Fault.
- The implementation of disaster management in Aceh has now moved to follow the national disaster management system by changing the perspective from emergency response to disaster risk reduction efforts.
- BPBA that established on June 22, 2010, has been an important working instrument for the Aceh Government that carries out its tasks and functions in the context of disaster management in Aceh.
- This study proposes three concepts that can be applied by BPBA to enhance its capacity, i.e.: (1) Implementing natural leadership model to strengthen its internal performance, especially enhancing leaders' capacity to act appropriately in any uncertainty situations ([Dennis, 2014](#)); (2) Improving post-disaster funding scheme ([Mangkusubroto, 2011](#)); and (3) Enhancing public sectors role in disaster risk reduction activities ([Djalante, 2012](#)).

## LIMITATION AND STUDY FORWARD

The limitation of this study is the lack of BPBA top official elements understanding and awareness about the importance of a well-structured institution which able to synergize its activities with other related stakeholders from time to time.

Therefore, there must be a collective understanding of the condition of Aceh as a disaster-prone area by all elements of society in Aceh (government, related organizations, and community) so that they do not have to be feared of this situation. But how do we increase the ability to adapt and increase the knowledge about disaster risk reduction must also be contemplated together.

In consequence, all elements of society have to take their part in the activities and the government has to open broader opportunities for multidisciplinary science and multi-sectoral layers. BPBA as a leading sector, in addition, to improving internal quality (such as applying a natural leadership style), must also be able to build synergies with the private sector



community. The involvement of many parties is needed to be able to discuss more comprehensive actions in disaster risk reduction and to "rebuild better".

The BRR Aceh – Nias had carried out the synergy after the 2004 earthquake and tsunami. Therefore, that existing legacy has to be socialized to increase public awareness and participation in disaster risk reduction.

#### ACKNOWLEDGMENT

The authors wish to thank all parties who have participated and contributed to this research, especially to the official elements of The Aceh Disaster Management Agency (BPBA) and the BPBA's stakeholders (SAR team, military elements, etc.) for their fruitful information and knowledge which cannot be obtained by the author in another place.

#### CO-AUTHOR CONTRIBUTION

The co-author has a very important role in this research, especially in assisting in data collection, reviewing references, and interviewing resources persons.

#### REFERENCES

1. Aceh, B., Sugimoto, M., Iemura, H., & Shaw, R. (2010). *Tsunami height poles and disaster awareness Memory, education and awareness of disaster on the reconstruction for resilient city in*. 19(5), 527–540. <https://doi.org/10.1108/09653561011091869>
2. Adiyoso, W., & Kanegae, H. (2013). The Preliminary Study of the Role of Islamic Teaching in the Disaster Risk Reduction (A Qualitative Case Study of Banda Aceh, Indonesia). *Procedia Environmental Sciences*, 17, 918–927. <https://doi.org/10.1016/j.proenv.2013.02.110>
3. Bappeda Aceh. (2005). *Pembangunan Propinsi Aceh Pasca Bencana Alam*. Banda Aceh: Bappeda Propinsi Aceh.
4. Chang, Y., Wilkinson, S., & Potangaroa, R. (2012). *Resourcing for post-disaster reconstruction : a comparative study of Indonesia and China*. 21(1), 7–21. <https://doi.org/10.1108/09653561211202674>
5. Dalidjo, N., 2019. *Roles and challenges of private sector during disaster*. Perkumpulan Skala: Jakarta.
6. Dennis, R. (2014). Improved performance: Nurturing natural leadership. *Journal of Organisational Transformation & Social Change*, 11(2), 108-124. <https://doi.org/10.1179/1477963313Z.00000000016>
7. Dewi, M. K., Manochin, M., & Belal, A. (2019). Marching with the volunteers: Their role and impact on beneficiary accountability in an Indonesian NGO. *Accounting, Auditing and Accountability Journal*, 32(4), 1117–1145. <https://doi.org/10.1108/AAAJ-10-2016-2727>
8. Dias, N. T., Keraminiyage, K., & DeSilva, K. K. (2016). Long-term satisfaction of post disaster resettled communities: The case of post tsunami – Sri Lanka. *Disaster Prevention and Management*, 25(5), 581–594. <https://doi.org/10.1108/DPM-11-2015-0264>
9. Djalante, R. (2012). Adaptive governance and resilience: the role of multi-stakeholder platforms in disaster risk reduction. *Natural Hazards Earth Syst. Sci.*, 12(1), 2923-2942. <https://doi.org/10.5194/nhess-12-2923-2012>
10. Farah, M., & Rajib, S. (2014). Risk Communication through Community-based Society Organizations as Local Response to Disaster in Bandung, Indonesia. In *Community, Environment and Disaster Risk Management: Vol.14. Risks and Conflicts: Local Responses to Natural Disasters* (pp. 231–250). [https://doi.org/10.1108/S2040-7262\(2013\)0000014016](https://doi.org/10.1108/S2040-7262(2013)0000014016)
11. Gaillard, J. C., Clavé, E., & Kelman, I. (2008). Wave of peace? Tsunami disaster diplomacy in Aceh, Indonesia. *Geoforum*, 39(1), 511–526. <https://doi.org/10.1016/j.geoforum.2007.10.010>
12. Gore, T., & Fischer, T. B. (2014). Uncovering the factors that can support and impede post-disaster EIA practice in developing countries: The case of Aceh Province, Indonesia. *Environmental Impact Assessment Review*, 44(September 2010), 67–75. <https://doi.org/10.1016/j.eiar.2013.09.001>
13. Guo, X., & Kapucu, N. (2017). Examining livelihood risk perceptions in disaster resettlement. *Disaster Prevention and Management: An International Journal*, 26(5), 565–581. <https://doi.org/10.1108/DPM-06-2017-0121>
14. Hahn, R. (2013). ISO 26000 and the standardization of strategic management processes for sustainability and corporate social responsibility. *Business Strategy and the Environment*, 22(7), 442-455. <https://doi.org/10.1002/bse.1751>
15. Hamza, M., & Månsson, P. (2019). The human dimension of early warning – a viewpoint. *International Journal of Disaster Resilience in the Built Environment*. <https://doi.org/10.1108/IJDRBE-07-2019-0040>
16. HusniRahiem, M. D., Krauss, S. E., & Rahim, H. (2018). The Child Victims of the Aceh Tsunami: Stories of Resilience, Coping and Moving on with Life. *Procedia Engineering*, 212(2017), 1303–1310. <https://doi.org/10.1016/j.proeng.2018.01.168>
17. Iemura, H., Takahashi, Y., & Pradono, M. H. (2006). *Earthquake and tsunami questionnaires in Banda Aceh and surrounding areas*. 15(1), 21–30. <https://doi.org/10.1108/09653560610654211>
18. Ife, J., 2001. Local and global practice: Relocating social work as a human rights profession in the new global order. *European Journal of Social Work*, 4(1), 5-15. <https://doi.org/10.1080/714052835>

19. Ismail, N., Okazaki, K., Ochiai, C., & Fernandez, G. (2017). Livelihood changes in Banda Aceh, Indonesia after the 2004 Indian Ocean Tsunami. *International Journal of Disaster Risk Reduction*, 28(February 2017), 439–449. <https://doi.org/10.1016/j.ijdrr.2017.09.003>
20. Ismail, N., Okazaki, K., Ochiai, C., & Fernandez, G. (2018). Livelihood Strategies after the 2004 Indian Ocean Tsunami in Banda Aceh, Indonesia. *Procedia Engineering*, 212, 551–558. <https://doi.org/10.1016/j.proeng.2018.01.071>
21. Izumi, T., & Shaw, R. (2015). Overview and introduction of the private sector's role in disaster management. In *Disaster Management and Private Sectors* (pp. 1-10). Springer, Tokyo. [https://doi.org/10.1007/978-4-431-55414-1\\_1](https://doi.org/10.1007/978-4-431-55414-1_1)
22. Jena, R., Pradhan, B., Beydoun, G., Nizamuddin, Ardiansyah, Sofyan, H., & Affan, M. (2019). Integrated model for earthquake risk assessment using neural network and analytic hierarchy process: Aceh province, Indonesia. *Geoscience Frontiers*, (May). <https://doi.org/10.1016/j.gsf.2019.07.006>
23. Kamil, P. A., Utaya, S., Sumarmi, & Utomo, D. H. (2020). Improving disaster knowledge within high school students through geographic literacy. *International Journal of Disaster Risk Reduction*, 43(March 2019), 101411. <https://doi.org/10.1016/j.ijdrr.2019.101411>
24. Kent, L., & Affiat, R., 2017. *Gambling with truth: Hopes and challenges for Aceh's commission for truth and reconciliation*. Flowers in the wall: Truth and reconciliation in Timor-Leste, Indonesia, and Melanesia, 167-184. <https://doi.org/10.2307/j.ctvf3w1x3.21>
25. Kusumasari, B., & Alam, Q. (2012). Local wisdom-based disaster recovery model in Indonesia. *Disaster Prevention and Management: An International Journal*, 21(3), 351–369. <https://doi.org/10.1108/09653561211234525>
26. Kusumasari, B., & Alam, Q., 2012. Bridging the gaps: the role of local government capability and the management of a natural disaster in Bantul, Indonesia. *Natural hazards*, 60(2), 761-779. <https://doi.org/10.1007/s11069-011-0016-1>
27. Mangkusubroto, K., 2011. Analisis dinamika kolaborasi antara badan rehabilitasi dan rekonstruksi Aceh dan Nias (BRR) dengan lembaga donor pasca tsunami 2004 menggunakan drama theory. *Journal of Technology Management*, 10(1). <https://journal.sbm.itb.ac.id/index.php/mantek/article/view/131>
28. Mannakkara, S., & Wilkinson, S. (2013). Build Back Better principles for post-disaster structural improvements. *Structural Survey*, 31(4), 314–327. <https://doi.org/10.1108/SS-12-2012-0044>
29. Matsumaru, R., Nagami, K., & Takeya, K. (2012). Reconstruction of the Aceh Region following the 2004 Indian Ocean tsunami disaster: A transportation perspective. *IATSS Research*, 36(1), 11–19. <https://doi.org/10.1016/j.iatssr.2012.07.001>
30. Matsuura, S., & Razak, K. A. (2019). Exploring transdisciplinary approaches to facilitate disaster risk reduction. *Disaster Prevention and Management: An International Journal*, 28(6), 809–822. <https://doi.org/10.1108/DPM-09-2019-0289>
31. McDermott, R., Luelf, C., Hofmann, L., & Gibbons, P. (2017). International law applicable to urban conflict and disaster. *Disaster Prevention and Management: An International Journal*, 26(5), 553–564. <https://doi.org/10.1108/DPM-03-2017-0052>
32. Moniruzzaman, M. (2010). The ripples changed our lives: Health in post-tsunami Thailand. *Disaster Prevention and Management: An International Journal*, 19(3), 333–344. <https://doi.org/10.1108/09653561011052501>
33. Naithani, S. (2019). *Social capital and livelihood strategies in response after 2013 Kedarnath disaster (India)* . <https://doi.org/10.1108/DPM-07-2019-0221>
34. Nazara, Suahasil and Budy, P., R. 2007. *Aceh-Nias Reconstruction and Rehabilitation: Progress and Challenges at the End of 2006*. Tokyo: Asian Development Bank Institute. Available: <http://www.adbi.org/discussionpaper/2007/06/26/2288.acehnias.reconstruction.rehabilitation/>
35. Neri, B., Scuteri, S., Miniati, S., & Hommes-italia, F. T. (n.d.). *From emergency relief to livelihood recovery Lessons learned from post-tsunami experiences in Indonesia and India*. <https://doi.org/10.1108/09653560810887329>
36. Nolz, P. C., Doerner, K. F., & Hartl, R. F. (2010). Water distribution in disaster relief. *International Journal of Physical Distribution and Logistics Management*, 40(8), 693–708. <https://doi.org/10.1108/09600031011079337>
37. Nurhasim, A., 2017. Kenapa Gempa Bumi Di Aceh Bisa Sangat Dahsyat? Ini Jawabannya, Indonesia. Tempo.co. <https://tekno.tempo.co/read/880892/kenapa-gempa-bumi-di-aceh-bisa-sangat-dahsyat-ini-awabannya>
38. Oloruntoba, R. (2005). A wave of destruction and the waves of relief: Issues, challenges and strategies. *Disaster Prevention and Management: An International Journal*, 14(4), 506–521. <https://doi.org/10.1108/09653560510618348>
39. Ophiyandri, T., Amaratunga, D., & Pathirage, C. (2011). *Critical success factors for housing reconstruction projects in the pre-construction stage in Indonesia*. <https://doi.org/10.1108/IJDRBE-03-2013-0005>
40. Perry, M. (2007). Natural disaster management planning: A study of logistics managers responding to the tsunami. *International Journal of Physical Distribution and Logistics Management*, 37(5), 409–433. <https://doi.org/10.1108/09600030710758455>

41. Phelps, N. A., Bunnell, T., & Miller, M. A. (2011). Post-disaster economic development in Aceh: Neoliberalization and other economic-geographical imaginaries. *Geoforum*, 42(4), 418–426. <https://doi.org/10.1016/j.geoforum.2011.02.006>
42. Pheng, L. S., Raphael, B., & Kit, W. K. (2006). Tsunamis: Some pre-emptive disaster planning and management issues for consideration by the construction industry. *Structural Survey*, 24(5), 378–396. <https://doi.org/10.1108/02630800610711979>
43. Rahmayati, Y. (2016). *Reframing “building back better” for post-disaster housing design: a community perspective*. <https://doi.org/10.1108/IJDRBE-05-2015-0029>
44. Shah, R., & Lopes Cardozo, M. (2014). Education and social change in post-conflict and post-disaster Aceh, Indonesia. *International Journal of Educational Development*, 38, 2–12. <https://doi.org/10.1016/j.ijedudev.2014.06.005>
45. Sina, D., Chang-Richards, A. Y., Wilkinson, S., & Potangaroa, R. (2019). A conceptual framework for measuring livelihood resilience: Relocation experience from Aceh, Indonesia. *World Development*, 117, 253–265. <https://doi.org/10.1016/j.worlddev.2019.01.003>
46. Sina, D., Chang-Richards, A. Y., Wilkinson, S., & Potangaroa, R. (2019). What does the future hold for relocated communities post-disaster? Factors affecting livelihood resilience. *International Journal of Disaster Risk Reduction*, 34(March 2018), 173–183. <https://doi.org/10.1016/j.ijdrr.2018.11.015>
47. Swainson, L., & Mahanty, S. (2018). Green economy meets political economy: Lessons from the “Aceh Green” initiative, Indonesia. *Global Environmental Change*, 53(February), 286–295. <https://doi.org/10.1016/j.gloenvcha.2018.10.009>
48. Syafwina. (2014). Recognizing Indigenous Knowledge for Disaster Management: Smong, Early Warning System from Simeulue Island, Aceh. *Procedia Environmental Sciences*, 20, 573–582. <https://doi.org/10.1016/j.proenv.2014.03.070>
49. Syahputra, H. (2019). *Indigenous knowledge representation in mitigation process: a study of communities’ understandings of natural disasters in Aceh Province, Indonesia*. 4(February 2018), 94–102. <https://doi.org/10.1108/CC-11-2017-0046>
50. Takeda, M. B., & Helms, M. M. (2006). “Bureaucracy, meet catastrophe”: Analysis of the tsunami disaster relief efforts and their implications for global emergency governance. *International Journal of Public Sector Management*, 19(2), 204–217. <https://doi.org/10.1108/09513550610650446>
51. Takeda, M. B., & Helms, M. M. (2006). “Bureaucracy, meet catastrophe”: Analysis of Hurricane Katrina relief efforts and their implications for emergency response governance. *International Journal of Public Sector Management*, 19(4), 397–411. <https://doi.org/10.1108/09513550610669211>
52. Takim, R., Mohammad, M. F., & Nawawi, A. H. (2018). Malaysian Entrepreneurship through “Building Back Better” (BBB) Agenda in the Redevelopment of Banda Aceh. *Procedia Engineering*, 212(2017), 324–331. <https://doi.org/10.1016/j.proeng.2018.01.042>
53. Tuohy, R., Stephens, C., & Johnston, D. (2014). Qualitative research can improve understandings about disaster preparedness for independent older adults in the community. *Disaster Prevention and Management: An International Journal*, 23(3), 296–308. <https://doi.org/10.1108/DPM-01-2013-0006>
54. Von Meding, J., Wong, J., Kanjanabootra, S., & Taheri T., M. (2016). Competence-based system development for post-disaster project management. *Disaster Prevention and Management*, 25(3), 375–394. <https://doi.org/10.1108/DPM-07-2015-0164>
55. Yuan, H., Clifton, D. O., Stone, P., & Blumberg, H. H. (2000). Positive and negative words: Their association with leadership talent and effectiveness. *The Psychologist-Manager Journal*, 4(2), 199. <https://doi.org/10.1037/h0095892>