

ASEAN Insights

Monthly Commentaries on ASEAN Issues



LIVING WITH DISASTER

ASEAN Updates

Post-ASEAN Summit Highlights:
ASEAN Leaders to Double Efforts Towards
ASEAN Community 2015

"Best of ASEAN", Celebratory Programme of
2014 ASEAN-Rok Commemorative Summit to
Kick Off on 27 November

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An Overview**
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From the Editors



Dear readers,

Dear readers,

Southeast Asia is a disaster prone region. The Indian Ocean Tsunami (2004) and the Nargis Cyclone (2008) showed that countries in the region and beyond need to create a better cooperation in managing disasters. Since then, many progress happened. However, there are still a lot of jobs to be done.

This December edition tackles the issue of disaster management in ASEAN. The first article, by Jonatan Lassa from the Centre for Non-Traditional Security (NTS) Studies, S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University (NTU), Singapore, provides an overview of the development of disaster management in ASEAN and ASEAN countries in the last decade. The second article, by Rissalwan Haby Lubis, describes the differences and similarities of the characteristics of national disaster management agencies in the 10 ASEAN countries. The third article, by Mondastri K Sudaryo from the Health Research Center for Crisis and Disaster (HRCCD), Faculty of Public Health, Universitas Indonesia, elaborates the lesson learned from the Indian Ocean Tsunami 2004.

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Disaster Management in ASEAN: An Overview

Jonatan Lassa



Typhoon Ondoy_Makati_The Philippines_Denison Uy (Flickr: Creative Commons)

Introduction

There are at least four ways to measure the progress of disaster management in ASEAN. The first way is to measure the progress made by member states based on the self-evaluation reports by UNISDR member states from ASEAN. Second, by looking at the world level achievement of ASEAN as a regional institution. Third, by focusing on the recent rise of NGOs sectors in ASEAN working in the field of disaster management and their implication for disaster governance. Lastly, we can also do critical evaluation and question how to move forward for better outcomes in governing disaster risks. This paper is part of documented knowledge based on real action in ASEAN over the last 10 years.

ASEAN as Regional Disaster Management Model?

There have been at least three key success of ASEAN as an institution where it achieved some legally binding agreement related to risk and disasters. First is ASEAN Agreement on Disaster Management and Emergency Response (hereinafter AADMER) that has been ratified by all ten Member States and entered into force on 24 December 2009. ASEAN Agreement on Transboundary Haze Pollution in 2002 that was recently ratified by Indonesia before the former President Susilo Bambang Yudhoyono stepped down from the presidential office in 2014. The last is the establishment of APTERR (ASEAN Plus Three Emergency Rice Reserve) which is seen as a good

practice that often used as a model where for developing/strengthening other emergency food reserve initiatives in the regions such as SAARC (South Asian Association for Regional Cooperation). However, due to the limited space, this paper will not discuss the cases of APTERR and ASEAN Transboundary Haze Agreement.

Evolution of ASEAN Disaster Management

ASEAN Cooperation on Disaster Management started since early 1970s. In 1971, disaster management experts in the ASEAN region formed the ASEAN Expert Group on Disaster Management (AEGDM) and met every two years. This early initiative have culminated in the ASEAN Declaration on Mutual Assistance on Natural Disasters in June, 1976. The Declaration of ASEAN Concord (Bali Concord I), adopted on 24 February, 1976, further stressed the need for cooperation in disaster management within ASEAN. One of its eight principles and objectives was as follows: "natural disasters and other major calamities can retard the pace of development of member states; therefore, they shall extend, within their capabilities, assistance for relief of member states in distress." The agreement was known as ASEAN Declaration on Mutual Assistance on Natural Disasters, signed in Manila on 26 June, 1976.

The awareness that ASEAN is a disaster prone region has existed far before the 1976 declaration. However, given its lack of the capacity to build its

regional capacity in disaster management, there seems to be little progress for almost 30 years. In early 2003, The ASEAN Committee on Disaster Management (ACDM) was established and its committee members were the heads of national disaster management agencies of ASEAN Member Countries. Since then, the "ACDM assumes overall responsibility for coordinating and implementing the regional activities" where they met for the first time in Bandar Seri Begawan, Brunei Darussalam in December 2003.

The legitimacy of the ACDM increased significantly soon after the Indian Ocean Tsunamis (IOT) 2004 which exemplifies clear evidence that not all natural hazards and large scale disasters can be tackled by a single country alone. The IOT 2004 and the 2008 Cyclone Nargis highlighted the facts that countries need regional and international cooperation in disaster management. In fact, there is an increasing trend of disaster risks measured by natural hazards incidents from 1960-2013 in the region as seen in Figure 1.¹

ASEAN Disaster Management Agreement

The ACDM mission got accelerated by the incidents of IOT 2004 and Nias Earthquake 2005. ASEAN responded institutionally with the signing of AADMER by all the ASEAN member states in July 2005. It functions as a formal mechanism where ASEAN can improve its cooperation through a united and coordinated response toward disasters within the region. It was ratified by all ten countries in ASEAN and entered into force on 24 December 2009.

The objective of AADMER is to reduce disaster

losses in ASEAN region, and to jointly respond to disaster emergencies. It serves as a legal framework for all ASEAN Member States and serves as a common platform towards a resilient ASEAN. AADMER aims to provide effective mechanisms to achieve substantial reduction of disaster losses in lives and in the social, economic and environmental assets of ASEAN member states, and to jointly respond to disaster emergencies through concerted national efforts and intensified regional and international cooperation.

AADMER is seen as the backbone and common platform for all disaster risk and emergency management in ASEAN. Very recently, a declaration was made in the ASEAN Summit 2013 namely "ASEAN declaration on enhancing cooperation in disaster management"²

AADMER governance structure consists of ASEAN Committee on Disaster Management and Governing Board for AHA Center. The ASEAN Committee on Disaster Management consists of four working groups:

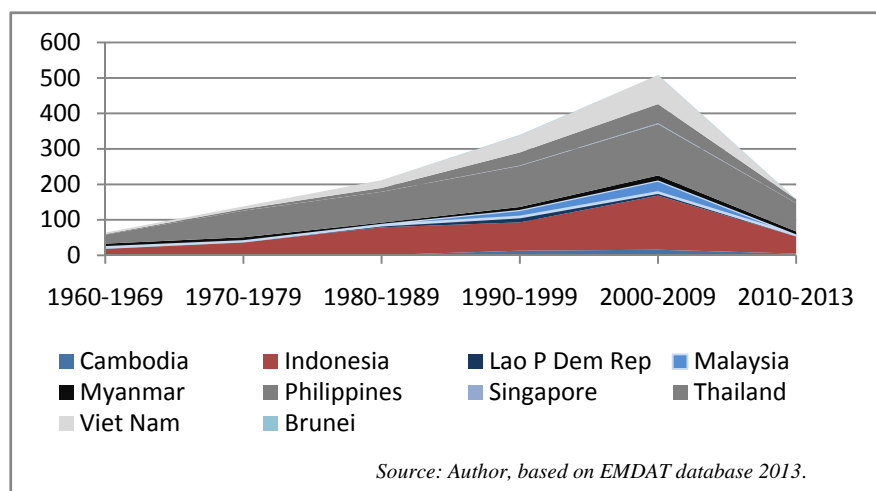
Preparedness and response; Risk assessment, monitoring and early warning system; Prevention and mitigation; and Recovery.

AADMER Implementation and AHA Center

Some of the recent progress of AADMER includes the establishment and the operation of AHA Center (ASEAN coordinating center for humanitarian assistance on disaster management) on 17 November 2011, through the signing of the Agreement on the Establishment of AHA Centre by the ASEAN Foreign Ministers, witnessed by ASEAN Heads of States, during the 19th ASEAN Summit in Bali, Indonesia.³

AHA is headquartered in Jakarta. However, depending on the cases, AHA headquarter can move closer to the ground - depending on the scale of disasters events. AHA Centre is mandated to coordinate/lead ASEAN responses and serves engine under the

Figure 1. Trend in Disaster Risks in ASEAN



¹ However, it should be noted that recent regional disaster statistics have been developed much better than in the past, resulting in better reports of disaster events in all ASEAN member states.

²Statement from ASEAN Leaders at the 23rd ASEAN SUMMIT in October 2013

AADMER, working closely with Secretary General of The implementation of AAMER today is mainly through the leading role of ASEAN Coordinating Centre for Humanitarian Assistance (AHA Centre) as the operational coordination body and engine of AADMER.

AADMER has been instrumental for ASEAN to achieve its share goals and function as a main regional policy backbone and coordinating platform in ASEAN. AHA Center has played roles from operational and coordination and the machine for AADMER ranging from high level policy dialogues to on the ground actions.

AADMER and AHA Center recently developed the following actions:

- The development of SASOP (Standard Operating Procedure for Regional Standby Arrangement and Coordination of Joint Disaster Relief and Emergency Response Operations)
- ASEAN ERAT (Emergency Response Assessment Team) - a pool of trained and rapidly deployable (within 24 hours). ERAT Training has been a regular annual event for ASEAN member states starting since 2011 till 2014 and will continue on regular basis.
- ARDEX Initiative (ASEAN Regional Disaster Emergency Response Simulation Exercise) conducted on annually rotating basis in member states (e.g. 2013 in Vietnam; 2012 in Indonesia?)

The rise of NGOs Sectors and complexity in disaster governance

The birth of NGOs sector in disaster management in ASEAN region over the last 15 years especially has started since the El-Nino crisis in 197/1998 and the occurrence of East Timor crisis in 1999. In Aceh, Indonesia, the first wave of NGOs establishment is marked by their responses to humanitarian crisis in Aceh soon after the fall of Suharto in late 1990s and early 2000s. The case was the Indian Ocean Tsunamis that hit ASEAN member states such as Indonesia, Malaysia, and Thailand.

In Aceh, the Indian Ocean Tsunami at the end of 2004 gave birth to the rise of local humanitarian NGOs. If not thousand, the number should be more than 500 in the whole province. Many are fading and disappeared but new ones are yet still coming. Similar thing happened following the Jogjakarta earthquake in 2006 and the West Sumatra earthquake on 30 September 2009. The birth of the NGOs do not occur locally in the disaster hot spots regions. There have been also observed progress of CSOs' growth responding to natural hazards coming from rich ASEAN economies such as Singapore. A speculative figure suggest that there have been at least a thousand NGOs have been established ASEAN responding to emergencies in the regions over last 10 years after the IOT 2014.⁴

Third, the recent rise of NGOs sectors in ASEAN working in the field of disaster management suggests that ASEAN member states needs to consider a mechanism where the quality of future disaster governance can be improved. Exposure of NGOs and other non-governmental actors including business organizations' CSR (corporate social responsibility).

ASEAN has been increasingly urban. With the rising middle class in ASEAN, there is a great potential for increasing humanitarian resources in the region. Moving forward, ASEAN can improve its quality of disaster governance by focusing on two things. First is to facilitate 'indigenous' civil society in ASEAN to comply with the universal standards and the Code of Conduct of International Red Cross and Red Crescent Movement and NGOs in disaster response programmes, the future of humanitarian response could be in danger.

Closing Remarks

Is ASEAN's disaster management advancing? Recognizing that no single country can deal with landscape disasters as exemplified by the case of Indian Ocean 2004, Cyclone Nargis 2008 and the Typhoon Haiyan 2013 is one thing. The collective action of the ASEAN member states complemented

³The ASEAN Leaders at the 15th ASEAN Summit in Cha-Am Hua Hin, Thailand, 23-25 October 2009, instructed the ACDM to ensure a fully operational AHA Centre as stated in Chairman's Statement: "We looked forward to the operationalisation of the ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre) in Jakarta, Indonesia, in accordance with the ASEAN Agreement on Disaster Management and Emergency Response, which would serve as an effective mechanism to reduce disaster losses in lives and in the social, economic and environmental assets, and to jointly respond to disaster at national and regional level"

⁴Globally, There is apparently new faces not seen nor heard a decade ago but now everyone heard new names, such as Clinton Foundation, Eastern Congo Initiative by Ben Affleck, Global Humanitarian Forum etc. One can go and criticize what the authors mentioned above meant with "international humanitarian NGOs." There is a claimed statistic as mentioned that NGOs grew from 400 a decade ago to 25,000 at the end of 20th century. See James Paul (Global Policy Forum, June 2000). See also Jocelyn Kelly 2009. "When NGOs beget NGOs: Practicing Responsible Proliferation" International Journal of Humanitarian Assistance. <http://sites.tufts.edu/jha/archives/451>

by ASEAN civil society organizations is also should be recognized as an achievement in itself.

Recently, the AADMER Partnership Group (APG), a consortium of seven civil society organizations formed to assist in the implementation of AADMER [www.aadmerpartnership.org] exemplify the fact that dealing with disasters requires hybrid governance approach, meaning that collective state actors and non-state actors operating in the region needs to be convergent in sharing resources and concern.

However, what matter most in all forms of (activities of) disaster management is that ASEAN should be a safer place for its present and future population. I argue that under the lights of the Hyogo Framework for Action for Disaster Risk Reduction that will end in 2015, it is the time to monitor the progress of disaster risk reduction in ASEAN in a more systematic way.

Jonatan Lassa

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Similarities and Differences: Characteristics of National Disaster Management Agencies in ASEAN Countries

Rissalwan Habdy Lubis



typhoon Haiyan in Tacloban city Aaron Favila (Flickr: Creative Commons)

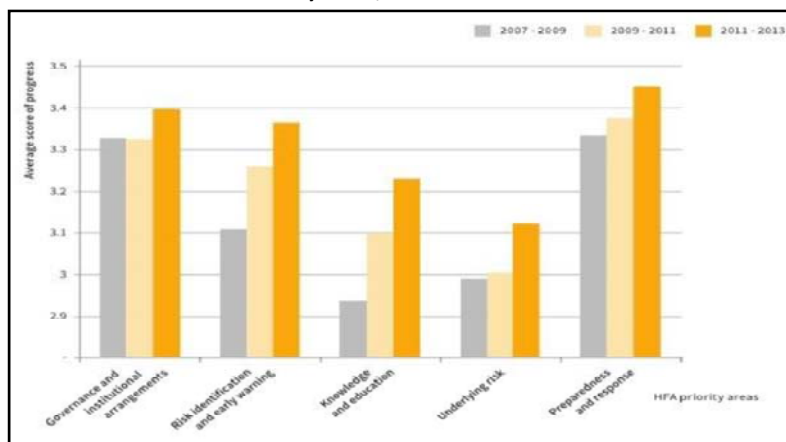
Southeast Asia is located in the area of disaster high risk, because of its position between three continental plates as well as the geographic position in collision area of the east and west Monsoon climate. The condition of this vulnerability would be a challenge for ASEAN leaders to institutionalize disaster management policies and strategies appropriate to the unique hazards in each country. This paper will describe the differences and similarities of the characteristics of national disaster management agencies in the 10 ASEAN countries that are the members of ASEAN Committee on Disaster Management (ACDM) and signed the ASEAN Agreement on Disaster Management and Emergency Response (AADMER). In addition, this paper will also discuss the agenda and the challenges of disaster management for the ASEAN region in the future.

In human history, natural disasters have been occurring since very ancient age, in many places, attacking many nations. Disaster is defined as: "serious disruption of the functioning of a community or a society causing widespread human, material, economic or environmental losses which exceed the ability of the affected community or

society to cope using its own resources" (UNISDR, 2012). In another phrase, Center for Research on the Epidemiology of Disasters (CRED) defined disaster as: "a situation or event, which overwhelms local capacity, necessitating a request for national or international external assistance" (CRED, 2007).

From these two definitions we can understand that there are two perspectives on disaster. The first perspective focuses on hazards and vulnerability, while the second perspective focuses on the ability and capacity to cope with disasters. Related to this second perspective, the Hyogo Framework for Action (HFA) priority area number 1 has clearly mentioned that issue of governance and institutional arrangement should be the basic requirement to achieve 4 other priority areas. But unfortunately in the period 2007 - 2009, the achievements of this number 1 priority area has been low compared to the other areas of priority. This can be seen in the following diagram.

Achievement of 5 HFA Priority Areas, in 2007 - 2013



Source: UNISDR, based on HFA Monitor data, in http://www.preventionweb.net/english/hyogo/gar/2013/en/home/GAR_2013/GAR_2013_212.html

Regarding to the HFA priority number 1, ASEAN as a regional organization has established the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) that aims to reduce the loss of life and damages caused by natural disasters in ASEAN countries. In 2011, ASEAN established the ASEAN Coordinating Centre for Humanitarian Assistance (AHA Centre).

As stipulated in article 22 AADMER, every country that signed the document must designate the competent authority as the National Focal Point (NFP) which presents the country in AHA Center. NFP is an agency or organization recognized as a national disaster management agency that formally assigned by the leader of each country. This agency will be authorized to send and to receive information about disaster situation, aid, and other relevant information on behalf of country leaders. These agencies are:

1. Brunei Darussalam, *National Disaster Management Centre*.
2. Cambodia, *National Committee for Disaster Management*.
3. Indonesia, *National Disaster Management Agency/Badan Nasional Penanggulangan Bencana (BNPB)*.
4. Lao PDR, *National Disaster Management Office Department of Social Welfare*.
5. Malaysia, *National Security Council*.
6. Myanmar, *Relief and Resettlement Department*.
7. Philippines, *National Disaster Risk Reduction and Management Council and Administrator*.
8. Singapore, *Singapore Civil Defense Force*.
9. Thailand, *Department of Disaster Prevention and Mitigation*.
10. Vietnam, *Directorate of Department of Dyke Management and Flood, Storm Control*.

These 10 national disaster management agencies have many interesting characteristics that will be elaborated in the following section.

VARIOUS HAZARDS TYPE IN ASEAN REGION

Before discussing about the characteristic and capacity of national disaster management agencies in ASEAN countries, it would be better to understand the type of hazards and vulnerability setting as foundation of the need for disaster management capacity.

Southeast Asia is a region that is prone to disasters due to its geographic, geological and socio-demographic. Geographically, the Southeast Asia is a region which is dominated by the sea and is located just near the equator. Because of this factor, Southeast Asia is influenced by a tropical marine climate, especially in Indonesia, which is exactly in the middle of the equator (Daldjoeni, 2003). Tropical marine climate conditions create rainfall in the region and thus susceptible to flooding due to high rainfall and tidal flooding, and landslides due to rain in the highlands, especially in Indonesia, which has the longest coastline and the most diverse topography settings (Lubis, 2009). During the dry season, when rainfall is very low, the potential for forest fires and peat becomes higher due to human negligence in cultivating farmland or plantations. In the Northeast region of ASEAN, the geographic formation creates vulnerability to thunderstorm, such as the Haiyan typhoon that struck the Philippines in 2013.

Geologically, the Southeast Asian region lies between plates of the earth's volcanic belt, the circum-Pacific and circum-Mediterranean (Winchester, 2006). As a result, most parts of the region are vulnerable to disasters due to high geological activity, such as volcanic eruptions, earthquakes, tsunami caused by the earth quake under the sea. This also includes disasters caused by the mud in the exploration area of PT Lapindo Brantas. Geological disasters caused by this vulnerability were once seized the attention of the world when the earthquake of 8.4 on the Richterscale, followed by a tsunami, hit Indonesia, Thailand and Malaysia by the end of 2004, killing more than 200,000 inhabitants. (Kompas, July 23, 2005).

Then from socio-demographic factors, Southeast Asia is also highly vulnerable. The vulnerability is related to the number of the population of Southeast Asia, 610 million people (UN-ESCAP,

2013), but segregated not only by territories but also divided by ethnic, religious, racial and other differences. Social segregation could trigger a horizontal conflict when control of resources is very uneven. The problems in the economic interests of inter-personal level could trigger a massive conflict, as happened in Indonesia in Monterado during 1980s, in Sanggauledo Sampit in late 1990s, and also Ambon, Poso and Ternate in the early 2000s (LEAD-UNDP, 2006). In similar pattern, inter-ethnic or religious conflicts also occur in the Philippines, as well as the conflict between the military and civilians in Myanmar and Thailand.

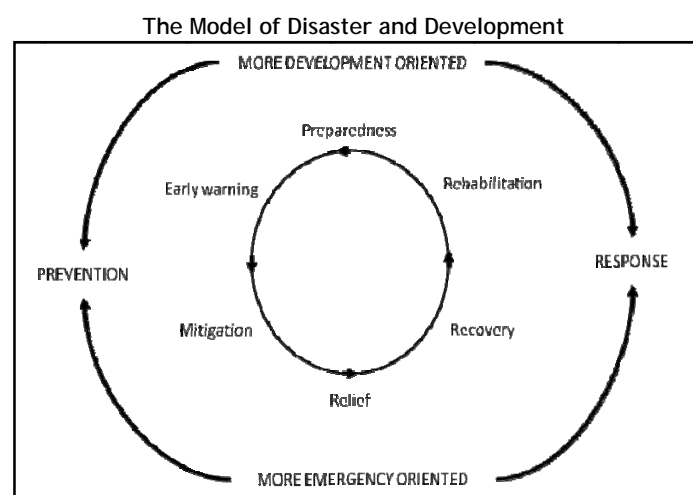
In addition, there are also other types of threats that are common in some countries that are not significantly exposed to the threat of natural hazard: technological failure and epidemic diseases. Some countries that have high-tech industrial development in the limited area—such as in Singapore and Malaysia—are relatively having a high risk of disasters due to technological failure. Meanwhile, countries with high frequency of outgoing and incoming mobility, such as Singapore, Indonesia, Malaysia and Thailand, become very vulnerable to the spread of epidemic diseases, such as avian influenza (H5N1 virus), SARS, swine flu, and ebola virus. Other than human mobility factor, weakness in health surveillance is also a significant factor.

Based on data released by UN-ESCAP in 2013, as presented in the table below, 2012 has been a year with many disaster incidents. The Philippines is the country with the most natural disaster events, followed by Indonesia, Vietnam, Myanmar and Cambodia. Meanwhile, in the previous year Thailand also experienced a flood that had resulted in losses of up to 24,500 million USD in 2011 (UN-ESCAP, 2013).

The characteristic of disasters in the ASEAN region is the same as the global pattern of disaster events. Globally, catastrophic events are dominated by the disasters caused by climatological and geophysical factors, such as floods, droughts, landslides, forest fires and storms. However, the impact of losses and people affected more precisely due to geological factors, such as volcanoes, earthquake and tsunami.

THE UNIQUENESS OF NATIONAL DISASTER MANAGEMENT AGENCIES IN ASEAN COUNTRIES

From the data on variations in the type and impact of disasters in the ASEAN region above, we can see that the institutional model of disaster management agencies will also be different. Referring to Collins(2009), model of disaster management should indeed be integrated in the general development pattern, as shown in the following chart.



Source: Collins, 2009: 27

Impact of Natural Disaster in ASEAN Countries, in 2012

Country	Number of Natural Disaster Event	Number of Mortalities	Number of People Affected	Economic Damage (in million USD per annum)
Brunei Darussalam				
Cambodia	1	14	72.000	0
Indonesia	15	107	48.000	0
Lao PDR				
Malaysia				
Myanmar	2	40	86.000	0
Philippines	22	2.415	12.493.000	1.089
Singapore				
Thailand	1	0	236.000	0
Timor Leste				
Vietnam	4	72	59.000	237
Total	45	2.648	12.994.000	1.328

Source: UN-ESCAP, 2013

From this model, we can categorize the variation of institutional response in each country. Moment of establishment is important to be discussed. Some countries re-establish a new institution for disaster management because they experienced a very large disaster event. However, other countries such as Singapore and Malaysia have long regarded disaster as an issue of national security and public safety.

Associated with the models, changes in disaster management agency pattern, from more emergency-oriented to more development-oriented, which is carried out by Indonesia and the Philippines, there are very interesting situations to be compared. The establishment of the National Disaster Management Agency (BNPB) in 2008 in Indonesia, based on Act 24 of 2007. The catastrophic conditions that encourage the enactment of the law are earthquakes and tsunami in 2004. While in the Philippines, the establishment of National Disaster Risk Reduction and Management Council and administrator based on the Law of the Republic of 10, 121 in 2009, was triggered by a large storm event and flood disaster known as "mega Ondoy" in 2009. This means that Indonesia takes four years since the cataclysmic events to establish a national institutional level of disaster management, while the Philippines only take one year.

The uniqueness of the characteristics of the national disaster management agency in the ASEAN countries can be seen in the table below.

Typology of National Disaster Management Agency in ASEAN Countries

Country	Major Hazards	Name of Agency	Establishment	Scope of work
Brunei Darussalam	Hazes, Storms	National Disaster Management Centre (NDMC)	2006	Natural & non natural disaster; pre, response, post
Cambodia	Flood, Drought, Storms	National Committee for Disaster Management (NCDM)	1995	Natural disaster; pre, response, post
Indonesia	Earthquake, Volcanoes, Tsunami, Flood, Landslide, Drought	National Disaster Management Agency (BNPB)	2008	Natural disaster; pre, response, post
Lao PDR	Flood, Drought	National Disaster Management Office Department of Social Welfare	2011	Natural disaster; pre, response, post
Malaysia	Flood, Hazes, Epidemic diseases	National Security Council	2007	National security, public safety, crisis & disaster; pre, response, post
Myanmar	Fire, Flood, Storm Epidemic diseases,	Relief and Resettlement Department	2012	Natural disaster; response, post
Philippines	Storm, Flood, Volcanoes, Tsunami, Earthquake	National Disaster RISK Reduction and Management Council and Administrator	2010	Natural disaster; pre, response, post
Singapore	Hazes, Flood, Epidemic diseases	Singapore Civil Defense Force (SCDF)	1986	National security, public safety, crisis & disaster; pre, response, post
Thailand	Flood, Landslide, Epidemic diseases	Department of Disaster Prevention and Mitigation	2002	Natural disaster; pre, response, post
Vietnam	Flood, Storm, Epidemic diseases	Directorate of Department of Dyke Management and Flood, Storm Control	2010	Natural disaster; pre, response, post

Source: modified from AHA Center, 2014

From the table above we can see variations in the time of establishment. The majority of the agencies are disaster management agencies that start operating since less than 10 years ago (except in Cambodia, Singapore, and Thailand).

Almost all of the national disaster management agencies in ASEAN countries focus on natural disasters, except for three countries that are also members of the Commonwealth of Great Britain: Singapore, Brunei Darussalam, and Malaysia. These countries also combine the handling of the crisis caused by non natural disasters in the institutional mandate of national disaster management agency in their countries.

In terms of scope of work, all countries have been conducting the three phases of disaster management: pre-disaster, disaster response and post-disaster. However, Myanmar focuses only in disaster and post-disaster response. It is influenced by the model of the military government that is very cautious in defining risk management.

AGENDA AND DISASTER MANAGEMENT CHALLENGES IN ASEAN

From the description of the characteristics of the national disaster management agencies in ASEAN countries, there are several agenda to be put as priorities:

- Strengthening disaster management institutions, through the public-private partnership approach, due to the differences in the capacities of ASEAN countries.
- Promoting public awareness in ASEAN society to be more involved in disaster management efforts, in line with the spirit of ASEAN Community 2015.
- Expanding the network of cooperation among the countries of ASEAN with other countries in the Asia Pacific region, particularly in the issue of disaster risk reduction and climate change adaptation.

However, challenges are ahead. Some of them are:

- How to make the political agreement in disaster management amongst the leader become the sociological and cultural movement in civil society and grass roots community, in the context of ASEAN socio-cultural Community
- How to ensure the economic growth and development can work better, through the efforts of a more coordinated disaster management
- How to develop the use of technology in the ASEAN region for disaster management efforts, particularly for disaster forecasting and early warning system
- How to anticipate the conditions of global warming and environmental degradation that can lead to greater disaster.

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INTERNET RESOURCES

- <http://www.un-spider.org/links-and-resources/institutions/vietnam-disaster-management-center-dmc>
- <http://vinaware.pdc.org/projects/vietnam/vnprofile.htm>
- <http://cidbimena.desastres.hn/docum/crid/Agosto2004/pdf/eng/doc15151/doc15151-contentido.pdf>
- <http://www.asemwater.org/AboutASEMWater/Goals/>
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- <http://www.asemwater.org/Partnerships/Partners/2011-05-19/183.html>
- <http://www.preventionweb.net/english/professional/contacts/v.php?id=2997>
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Background

In Sunday morning, 26th of December 2004, a strong (in 8.9 Richter scale) of earthquake occurred in the west of northern Sumatra and then triggered a giant tsunami destroying not only northern part of Sumatera island in Indonesia, but also the coasts of neighboring countries of Sri Lanka, Maldives, India, Thailand and Myanmar. It was estimated that at least five million people in the above countries were affected.

Among all those countries in the affected regions, Indonesia, particularly the Aceh (NAD) province, was the most severely hit and destructed by this powerful tsunami. About 415,000 houses were damaged in this region and almost a half of them (about 200,000) were in Aceh. Concerning the enormous of fatalities in the region, there were more than 280,000 of lives lost and almost 80% (about 221,000) were from Aceh^{1, 2, 3}.

This short article will address what kind of lesson could be learned, not only for Indonesia, Thailand and Myanmar, the three countries experiencing the devastating impact of the disaster, but also for other ASEAN neighboring countries with respect to health impact due to communicable disease occurrence following the tsunami.

Health Impact

The tsunami destroyed 14, out of the 21 districts in Aceh province. About 221,000 people were found dead or announced missing (approximately 4% of Aceh population). More than half million people

were displaced and about 150,000 were physically injured. Almost 700 local health staffs/ personnel were dead and/or missing causing great and long domestic lost of precious human resources.³

Out of total 693 incapacitated health facilities, more than 70% were destroyed and/or having major damage. Within 3 months after disaster, primary health care was provided for almost two million affected people and about 10,000 surgical interventions were done.^{2, 3}.

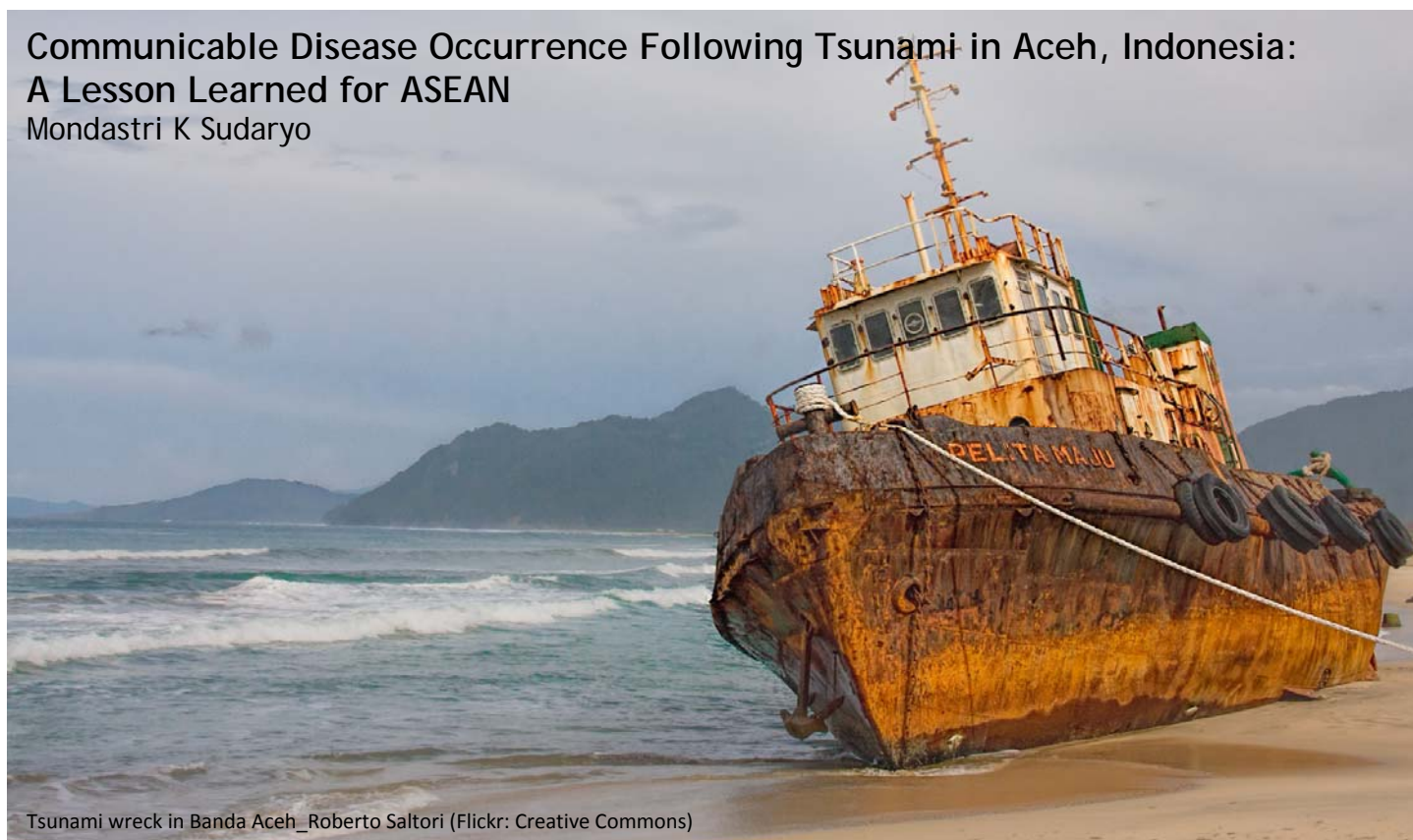
Communicable Disease Emergence

Concerning morbidity and mortality, acute respiratory infections (ARI), which were already contributed largely to mortality and morbidity in Indonesia, expectedly showed an immediate increase.⁴

This especially happened in crowded temporary housing, barrack, camps or tents, complicated with the weakened of immune systems, caused by shock, exhaustion and nutrition deficiency. As example, in a survey done 1 year after tsunami, the prevalence of mild ARI (acute respiratory infection) among 652 under-5 children living in barracks/ temporary housing spreading out in 50 areas in district of Aceh Besar, were quite high, about 60%, with several important family risk factors, such as having low education of mothers (55%), receiving no basic immunization of measles (27%) and DPT (18%) and experiencing underweight (32%). Conditions of many of those semi-permanent temporary housing were found not

Communicable Disease Occurrence Following Tsunami in Aceh, Indonesia: A Lesson Learned for ASEAN

Mondastri K Sudaryo



Tsunami wreck in Banda Aceh _Roberto Saltori (Flickr: Creative Commons)

sufficient to support healthy life, such as crowded, have no windows, insufficient of sun ray illumination, having watery or humid wood floor.^{3, 5}

In this giant tsunami involving extremely huge flooding and near drowning events, the occurrence of aspiration pneumonia, due to inhalation of contaminated water, sharply increased. Large proportion of aspiration pneumonia among adult survivors within the first two weeks after disaster was recorded. The number of cases remained high even until week five post tsunami.⁴

In addition to ARI, other sporadic cases of communicable infectious diseases like measles, diarrhea, hepatitis A & E, tetanus had also occurred over months.³

With respect to measles, no outbreak occurred, since the campaign of measles vaccination was immediately conducted in affected areas in Aceh.⁶

Interesting finding about tetanus was that the peak of the increasing cases was found almost 3 weeks after the tsunami, which was quite longer than average of its incubation period (i.e. about 10 days). This possible delay onset of the tetanus may indicate that the illness was not mainly due to physical trauma and wound at the time of the tsunami attack, but rather came from being wounded or pricked after the survivors removing debris from their destructed houses or searching for their valuable belonging in the debris.^{3, 4}

Despite the fact that about 500.000 IDPs (internally displaced people) staying in wide spread temporary housings, there were luckily no major outbreaks or epidemics emerged. Deaths due to communicable diseases after the tsunami were not higher than normal. Threat of epidemics from contamination from corpses was not proven either.^{2, 3}

Extensive cholera epidemic in massive ecological disruption, as feared by many people, including some health authorities was, thanks God, not proven to happen in Aceh. Around January, 20 cholera cases was suspected in district of Aceh Barat, however, no cholera was revealed in examination of stool samples. Even until 4 months after tsunami, no confirmed cases of cholera was reported, although immunization initiative was conducted using a new oral vaccine.⁴

In the past, cholera rarely occurred in Aceh (the last case was in March, 1996). This gives context that before tsunami, the outbreak was rare and low in frequency. In addition to that, experts

hypothesize that the water temperature in coastal areas affected by tsunami was too low for transmitting the cholera. Guha-Sapir and van Panhu is also noted that the likelihood of cholera to occur in Aceh was minimized by two effective preventive measures, i.e., supplying drinking and washing water adequately and providing small but organized temporary housing for the IDPs.⁴

It now becomes evident that nonstop adequate supply of safe drinking water is the most essential intervention to prevent and reduce the likelihood of outbreaks of cholera and other waterborne diseases.^{4, 6, 7}

Malaria and dengue, the two most endemic infectious diseases in two main islands of the country (Java and Sumatra), did not show significant increase in post-tsunami period. This might be, to some extents, related to low endemic rate of the diseases before the disaster (especially in the coastal areas of Aceh), non conducive of vector's breeding places after disaster and timely successful public health intervention taken since impact phase, such as establishing an early warning system for targeted epidemic-prone diseases (through collaboration of Provincial Health Office with WHO) and utilizing anti-vector sprays.^{3, 4}

Lesson for ASEAN

In ASEAN region, the Thailand and Myanmar have also shared the experiences of same tsunami, although with much smaller scales of destruction and casualties as compared to Indonesia.

Like in Aceh, many severe cases of aspiration pneumonia due to inhaling salt water contaminated with microorganism, mud and debris, were admitted in hospitals of Phuket province, Thailand. Concerning communicable disease in Thailand post tsunami, diarrheal cases increased after the tsunami attack, but then stabilized very soon. There has not been any cholera outbreak reported by the health authorities in Thailand. The overall low incidence of diarrhea and no report of cholera outbreak were quite likely due to serious efforts of authorities and many humanitarian agencies to provide adequate clean water.⁸

In Myanmar, similarly, no outbreak was reported after the tsunami.

Learning from tsunami in Indonesia, Thailand and Myanmar, as well as from other disaster experiences in other regions, major outbreaks or epidemics of communicable infectious diseases such as cholera, malaria and dengue may not necessarily occur after natural disaster. Particularly for cholera, experts believe that in

general there is no strong evidence demonstrating an increasing risk of cholera epidemics after acute natural disasters. Commonly, the crowded communities of huge displaced people itself predispose to introduce the spread of communicable diseases.^{4, 6}.

Concerning the regional natural hazard risk, expert assessment has indicated and underlined the potential for Asia-Pacific region (thus including ASEAN countries) to experience a mega disaster in the coming century, which will affect millions of population.⁹

ASEAN ten member countries sharing the hazard, vulnerability and impact in the region should thereby take great lessons from each other and prepare together in solid cooperation and coordination framework to develop and strengthen national and regional resilience toward natural disasters in the near future.

Conclusion

Overemphasizing the additional deadly impact of communicable disease outbreaks following the natural disasters, such as cholera and dengue, without strong epidemiological evidence would lead to panic and unnecessary public health activities. Thorough and accurate risk assessments of communicable disease occurrence by reviewing epidemiological data of the affected areas are always needed to make proper judgment about the potential risk for developing epidemics or outbreaks.^{4, 6}.

Strengthening the national and regional resilience toward natural disasters through the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) is a key priority.

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(Source: ASEAN Secretariat News)

ASEAN UPDATES

Post-ASEAN Summit Highlights: ASEAN Leaders to Double Efforts Towards ASEAN Community 2015

Jakarta, November 18th 2014, on behalf of ASEAN Secretary-General, H.E. Le Luong Minh, Deputy Secretary-General of ASEAN for Community and Corporate Affairs, H.E. Dr. AKP Mochtan, during the post-summit briefing at the ASEAN Secretariat reported that the three pillars of ASEAN Community have been implemented by approximately 85%. He added that the Leaders are committed to redouble efforts to achieve the goal of ASEAN Community.

Strategic positioning in the evolving regional architecture and in major power relations were stressed on the discussion on the political aspects. While on the economic front, the Leaders put attention to the macroeconomic and financial stability, domestic infrastructure weakness, and the deepening of economic integration and liberalization. Moreover, progress in socio-cultural area under the chairmanship of Myanmar in 2014, such as response to climate change, disaster risk reduction, poverty reduction, and promotion of the rights of migrant workers were also discussed. (Source: ASEAN Secretariat News)

"Best of ASEAN", Celebratory Programme of 2014 ASEAN-Rok Commemorative Summit to Kick Off on 27 November

Seoul, November 21st 2014, The ASEAN-Korea Centre will host an event called as "Best of ASEAN" on November 27th to December 14th 2014, as an effort to celebrate the upcoming ASEAN-Republic of Korea Commemorative Summit in Busan on December 11-12. ASEAN Film Festival, Jewels of ASEAN, ASEAN on Wheels and ASEAN-Korea Youth forum are the list of "Best of ASEAN Agenda", which is intended to bring ASEAN closer to the Korean public.

Event	Dates	Location
ASEAN FILM FESTIVAL 아세안영화제 국립현대미술관 서울관	11.27 - 12.4	국립현대미술관 서울관
ASEAN ON WHEELS 아세안 로드쇼 서울·대전·청주·광주·부산 등 순회	12.3 - 12.13	서울·대전·청주·광주·부산 등 순회
JEWELS OF ASEAN 아세안의 보석 서울 평화문광장	12.2 - 12.14	서울 평화문광장
ASEAN-KOREA YOUTH FORUM 한-아세안 청년포럼 서울시청 다목적홀	12.3	서울시청 다목적홀

"Best of ASEAN" is designed as an event to display the richness of ASEAN cultures. The cultural contents in "Best of ASEAN" are selected carefully by The ASEAN-Korea Centre as the result of consultation with the ASEAN Embassies in Korea. With regard to this event, The Secretary General of ASEAN-Korea Centre, H.E. Chung Hae-moon stated that the public support is an important element to ensure the success of ASEAN-Rok Commemorative Summit. It is hoped that the event will enhance Korean public attention to ASEAN -a close neighbour- and its rich cultures. (Source: ASEAN Secretariat News)