

BCP (Business Continuity Plan) For Natural Disaster Risks



The damages caused by the typhoon in the Philippines and the floods in Malaysia in December 2021 resulted in business interruption at many companies and made us become aware of the risk of business interruption due to natural disasters at each base in Southeast Asia countries. Under the situation of natural disaster risks that being assumed for further increase over the medium to long term, companies need to be more prepared to respond to natural disaster risks than ever before.

This article gives an overview of the risks of natural disasters in Southeast Asia up until current and assumption for the future, and explains the measures required by companies.

1. Situation of Natural Disaster Occurrence in Southeast Asia Countries and India

Southeast Asia has been exposed to many natural disasters risks, especially flood risk that have been traditionally recognized in each country, and many companies have been responding to it. *Figure 1* depicts the total number of flood disasters from 2000 to 2021, and it can be seen that the number of flood events, the number of victims, and the amount of damage have risen to a certain level. In addition, a certain number of cases occur every year in each country (*Figure 2*).

By looking at the number of events, India, Indonesia, and Philippines had very large number of events, and between 5-9 flood events occur every year. However when looking at the amount of damage, it can be seen that the values were remarkably high in India and Thailand. In Thailand, the great floods that occurred in 2011 accounted for the majority of damage, but in India, floods with a large scale of damage are constantly occurring. The damage scale is not only determined by the amount of rainfall during the rainy season and the number of typhoons hitting the land each year, but is also affected by the state of infrastructure in the flood area and the response of local residents and companies etc. At the time of great flood in Thailand, the flood may be caused by the amount of water reserved in the major dams before the beginning of the rainy season was quite large, making it difficult to play the role of a control valve, and there was a problem with the dam's water discharge operation etc.

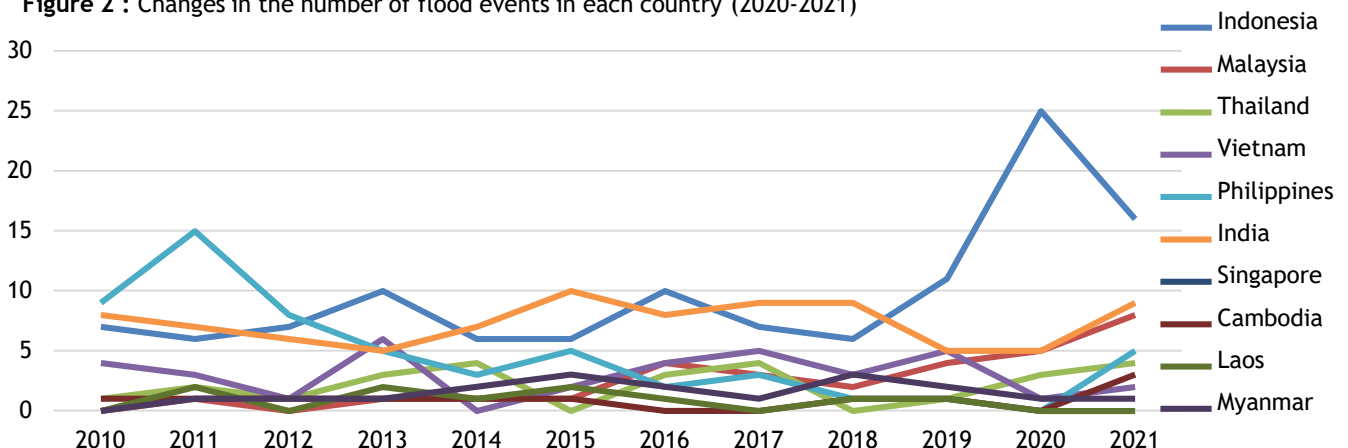
On the other hand, in Malaysia, where both the number of events and the amount of damage are not large, and in the Philippines, where the amount of damage is not so large, also suffered great damage at the end of last year. In Malaysia, due to the damage that occurred at the end of last year, we can see many companies have started to reconsider the flood response plan.

Figure 1 : Number of flood events, death cases and the amount of damage in each country (2020-2021) Unit : case / person / 1,000USD

	Number of Events	Number of Deaths	Number of Victims	Damage
Indonesia	176	4,268	8,148,502	7,387,933
Malaysia	53	162	881,938	1,425,800
Thailand	58	2,387	40,699,766	43,348,467
Vietnam	73	2,812	17,687,878	3,465,437
Philippines	100	1,174	23,627,353	2,685,199
India	185	31,263	347,754,102	84,834,592
Cambodia	19	981	10,862,250	1,574,662
Laos	15	268	2,894,061	153,807
Myanmar	25	606	3,375,503	140,353

Source: EM-DAT The International Disaster Database

Figure 2 : Changes in the number of flood events in each country (2020-2021)



Source: EM-DAT The International Disaster Database

2. Climate Change Risk in Southeast Asia Expected in the Medium to Long Term

In the Global Risks Report 2022, published by the World Economic Forum, environmental issues such as “Extreme weather” and “Climate action failure” etc. are mentioned as the most severe risks on a global scale over the next 10 years and also as the large risks in term of frequency and severity in the medium term and long term. In addition, environmental risks such as “Human-made environmental damage” and “Extreme weather” are also mentioned as serious risks in each country. ”

Figure 3 : The most severe risks on a global scale over the next 10 years

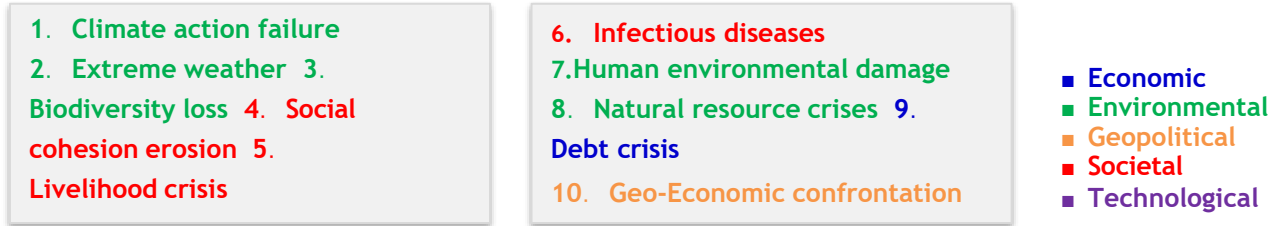


Figure 4 : Top risks in each country identified by the executive opinion survey

	1	2	3
Indonesia	Man-made environmental damage	-	Employment and livelihood crisis
Malaysia	Man-made environmental damage	Employment and livelihood crisis	Prolonged economic stagnation
Thailand	Debt crisis in large economies	Man-made environmental damage	Prolonged economic stagnation
Vietnam	Biodiversity loss	Asset bubble bursts in large economies	Infectious diseases
Philippines	Prolonged economic stagnation	Digital inequality	Extreme weather events
India	Fracture of interstate relations	Debt crisis in large economies	Widespread youth disillusionment
Singapore	Prolonged economic stagnation	Infectious diseases	Asset bubble bursts in large economies
Cambodia	Man-made environmental damage	Prolonged economic stagnation	Infectious diseases
Laos	Failure to stabilize price trajectories	Employment and livelihood crisis	Man-made environmental damage
Myanmar	-	-	-

Source : The Global Risks Report 2022

According to the Intergovernmental Panel on Climate Change (IPCC) scenario, the IPCC scenario shows that the surface temperature in the Southeast Asia region increases by about 1°C to 5°C compared to normal year by 2100 (1981-2010 average) (Figure 5). Moreover, rainy season precipitation is expected to increase by about 10% over the medium to long term (Figure 6). In addition, according to the IPCC's past report (2012), regarding to precipitation in Southeast Asia region, the frequency of heavy precipitation events that normally occurs once in 20 years is now expected to occur once in about 10 years between 2046-2065 and once in about 8 years between 2081-2100.

Figure 5 : Forecast of climate change in Southeast Asia

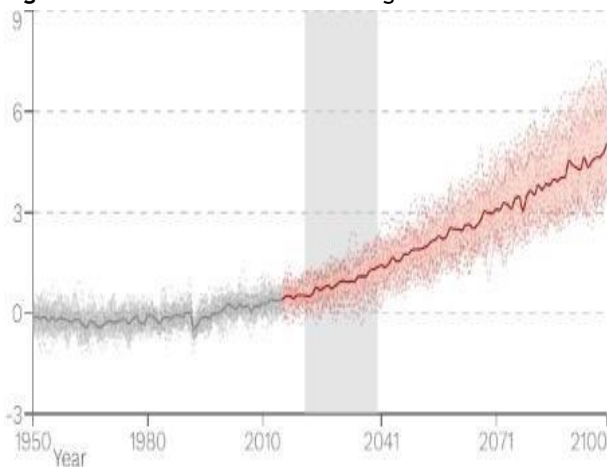
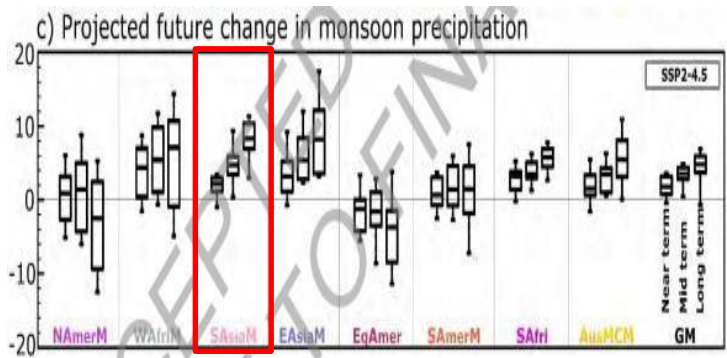


Figure 6 : Forecast of changes in rainfall during the rainy season



Source: IPCC WGI Interactive Atlas: Regional information (Advanced)
IPCC 6th Assessment Report Working group The Physical Science Basis

3. Efforts Required by Companies

As mentioned above, flood risk, which has caused great damage even until recently, is not expected to reduce in the medium to long term. On the contrary, it will increase. Since the spread of the new coronavirus infection in 2020, it seems that each company has been working on supplier diversification and dispersion, building and strengthening a mutual assistance system with other companies, secure and increase in working capital, production base diversification, etc. as a review of supply chain based on the covid-19 crisis, but in addition to these measures, it is necessary to work on improving the business continuity of existing bases as a response to the increasing risk.

To put it concretely, 1) Grasping the risk of natural disasters at each base, 2) Strengthening the crisis management response system, and 3) Strengthening the business continuity system.

1) Grasping the risk of natural disasters at each base

First things first, besides the company base, it is desirable **to accurately grasp the risk of natural disasters** at the locations such as distribution bases, contractors, suppliers, etc. The risk environment of natural disaster varies greatly depending on the country / region, and even within the same region, for example, the risk of inundation due to flooding may differ greatly depending on the height difference of the location and the status of infrastructure development such as surrounding embankments, etc. Also, in case of earthquake risk, the damage / impact level may differ depending on the earthquake resistance of buildings / facilities and the stability of infrastructure, and if possible, it is also desirable to grasp this information.

2) Strengthening the crisis management response system

To improve resilience, the development of a "Business Continuity Plan (BCP)" can be considered, but the components involved in developing BCP are divided into "crisis management" and "business continuity". After grasping the risk of natural disasters, the first thing that is commonly required regardless of the use and characteristics of the base is **the building and strengthening of a crisis management system**. Crisis management system points out to an immediate response system to ensure the safety of human life and prevent the spread of damage when the risk of natural disasters such as storms and floods, earthquakes, volcanic eruptions, etc. become apparent. Specifically, it is necessary to prepare emergency response plans and manuals that include the following components, and to inform thoroughly to related parties such as employees etc.

- Contact route in the event of a crisis (emergency contact network, reporting route when an abnormality occurs)
- Response system in the event of a crisis (establishment of response headquarters, points of cooperation with the head office and regional headquarters, etc.)
- Preparation during normal times (stockpiling food, water, etc., securing means of communication, education / training)
- Create response in the event of a crisis (initial response, secondary damage prevention, support request, etc.)

3) Strengthening the business continuity system

Next, among the components involved in developing BCP, it is necessary **to build and strengthen a system for "business continuity"**. BCP is considered as "an execution plan stipulated about advance preparations and response measures, etc. when normal business activities are suspended due to unexpected circumstances so that priority operations can be continued, the minimum service level can be maintained, and the business can be resumed within the required period", but as necessary components for that, in addition to the building a "crisis management" system described in the previous section, it is also necessary to consider the next 2 steps which are "Business Analysis" and "Solution (countermeasure)". These considerations require completely different things for each company / organization and require a certain level of knowledge and proficiency, anyway it is important to proceed the consideration within the realms of possibility.

- Business analysis: Among the businesses and operations that are performed on a daily basis, carry out the analysis of company's business to identify which business should be restored with higher priority such as "Business Impact Analysis (BIA)" and "Process Analysis" of important operations, etc.
- Solution (measures): Consider and implement concrete measures based on business analysis (in advance/after, hard measures/soft measures). This is also known as a "Business Continuity Strategy". Some of the inspection items for hard/soft measures are described below.

Hard Measures

- ✓ Are appropriate protective measures against the expected inundation height in place ?
- ✓ Are water-stopping plate, sandbags, etc. placed and installed at openings such as site entrances and exits?

Soft Measures

- ✓ Is there a system / rule to obtain the latest weather information and share / cooperate within the company ?
- ✓ Is there a system / rule for prompt initial response (sandbags, water stop plate installation, evacuation, etc.) in the event of a flood?

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