Chapter 3

Summary and Way Forward

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Chapter 3

Summary and Way Forward

1. Summary

Chapter 1 described oil supply resilience in Japan. The Great East Japan Earthquake prompted the government and the oil industries to alter the concept of oil supply security, and to prepare for not only supply risks abroad but also risks within the country. The government implemented a set of measures to mitigate damage and quicken recovery by (i) revising the Oil Stockpiling Law, (ii) establishing a national oil product reserve, (iii) enhancing the resilience of refiners and terminals, (iv) developing core gas stations, (v) setting up a Joint-Operation Plan for Oil Supply in Disasters, (vi) enhancing inter-ministries cooperation, and (vii) promoting user's reserve. These measures aim not only to upgrade resilience to natural disasters but also to streamline the communication between industries and government agencies. Industry players are also implementing measures such as (i) enhancing the resilience of refineries and shipping facilities; (ii) strengthening the distribution network; (iii) building a cooperative relationship; and (iv) conducting joint exercises among the government, oil companies, and other relevant organizations. The BCP with PDCA cycle is one of the most illustrative measures that can be used after an earthquake. It emphasizes preparedness and streamlining of communication. One cannot emphasize enough that the government and the industry should work together in these measures. Thus, communication and coordination among various organizations are critical.

Chapter 2 examined oil supply resilience in selected ASEAN member countries. Unlike Japan, oil demand will grow strongly and import dependency will rise in Cambodia, Indonesia, Malaysia, the Philippines, Thailand, and Viet Nam although the extent of demand growth and import dependency significantly vary between these countries. Transportation is the main demand sector in the region and is expected to remain so toward 2030, although demand will also increase in other sectors like residential, commercial, industry, and non-energy use.

National oil companies have strong presence in the oil industry in the region, with the exception of Cambodia. Therefore, it is usually the case that national oil companies are the owners and operators of the main oil infrastructure like refinery and oil terminal. Regulatory bodies are usually the ministry of energy and the like. However, no country has a specific ministry or minister that is in charge of national resilience and natural disaster management.

On oil supply resilience, all countries are aware of external risks (e.g. geopolitical tensions abroad), natural disasters, as well as accidents and sabotages at oil infrastructure and supply chains. For instance, Cambodia recognizes flood as a major threat; Indonesia, the Philippines, Thailand, and Viet Nam see sabotages and/or terror attacks as risks to oil supply in their territories. Malaysia, on the other hand, lists natural and industrial disasters in the disaster management protocol, but points out that these disasters have not caused a serious threat to oil supply in the country. Therefore, the details of risk identification obviously differ from country to country, depending on import dependency, geographical and climatic characteristics, the extent of infrastructure

developments, and the status of industrial and social stability. Nevertheless, most countries have experienced different degrees of oil supply disruptions, stemming from risks mentioned above.

All countries implement various countermeasures to oil supply disruption. Diversification and stockpiling are traditional and yet important countermeasures. Diversification can be implemented in transportation routes and modes (lorry, barge, and pipeline), as employed or planned by Cambodia, Indonesia, and Thailand. No countries in the ASEAN have national strategic oil reserve, but companies or importers are usually obliged to stock certain volumes. Malaysia, being a significant oil exporter, is the exception because there is no such obligation. Generally speaking, stockpiling has not been developed to the same extent as in OECD countries, and has remained an issue on oil supply security in the region.

The status of institutional framework is different between countries. While a general framework for emergency response has been developed in some countries, its functionality has not necessarily been tested in real emergency situations or in exercises. Indonesia for instance has institutionalized emergency response, but one could argue that detailed countermeasures have not been developed sufficiently. Meanwhile, Cambodia, the Philippines, and Viet Nam do not seem to have formulated emergency response structure designed to address domestic supply disruptions. The same can be said at the company level in these countries. Emergency plans, BCPs, and the like are available at major energy companies, such as Pertamina, PETRONAS, and PTT. However, regular assessments, upgrades, and exercises are not implemented. Lack of institutions, detailed countermeasures, regular assessments, and joint exercises suggest a poor level of preparedness, communication, and coordination in real oil supply disruptions.

2. Way forward

2.1. General policy for oil supply security

This report has focused on oil supply resilience in Japan and in selected ASEAN member countries. One could argue, in the meantime, that oil supply resilience is a part of oil supply security, and there is a significant overlap between supply security and resilience in terms of countermeasures.

Firstly, stockpiling is the typical countermeasure that addresses oil supply security and resilience. All countries recognize the need to develop stockpiling. Building stockpiling is a lengthy and costly business; however, it is the basis of any supply security policy. Many ASEAN member countries aim at further developing their stockpiling, and are encouraged to achieve their respective targets.

Secondly, infrastructure development is important, although each country has a different capacity to develop it. The development should include not only oil-related infrastructure such as refinery and pipeline but also general social infrastructure like roads and ports, which are prerequisites for oil transportation. Given the multi-utility of roads, ports, and other social infrastructure, it is the government's responsibility to develop such infrastructure. With strong demand growth, several major refinery projects in ASEAN member countries are underway, and many other oil-related infrastructure like pipelines, tanks, and depots. These infrastructure should obviously be disaster-proof and resilient to earthquakes, tsunamis, typhoons, floods, and other risk factors mentioned in the previous chapter.

2.2. Oil supply resilience to cope with internal risks

For oil supply resilience, planning, institutional and legal framework, and education are very important, aside from hardware such as refineries, tanks, and pipelines.

Chapter 1 described how Japan emphasized communication and coordination issues to be able to respond swiftly in emergency situations. While implementing recovery measures from the earthquake and tsunami, the government laid out institutional and legal framework first so that policies can be effectively implemented and that division of roles can be specified. Developing this framework is a time-consuming process, and governments in ASEAN member countries are encouraged to start the process before the next disaster happens.

In terms of institutional and legal framework, industries can work on enhancing their resilience to natural disasters and other risk factors associated with oil supply. Making a BCP is the obvious area with which to start. However, it is important to do it with a PDCA cycle. This is critical because risks and the business environment can change significantly over time. Therefore, regular assessment and joint exercise is important for any BCP to become updated and implementable.

2.3. International cooperation

This study revealed the different stages of oil supply resilience in selected ASEAN member countries. Given the wide range of supply resilience, capacity building is necessary for the government, industry officials, and their personnel to raise awareness and deepen their understanding of oil supply resilience.

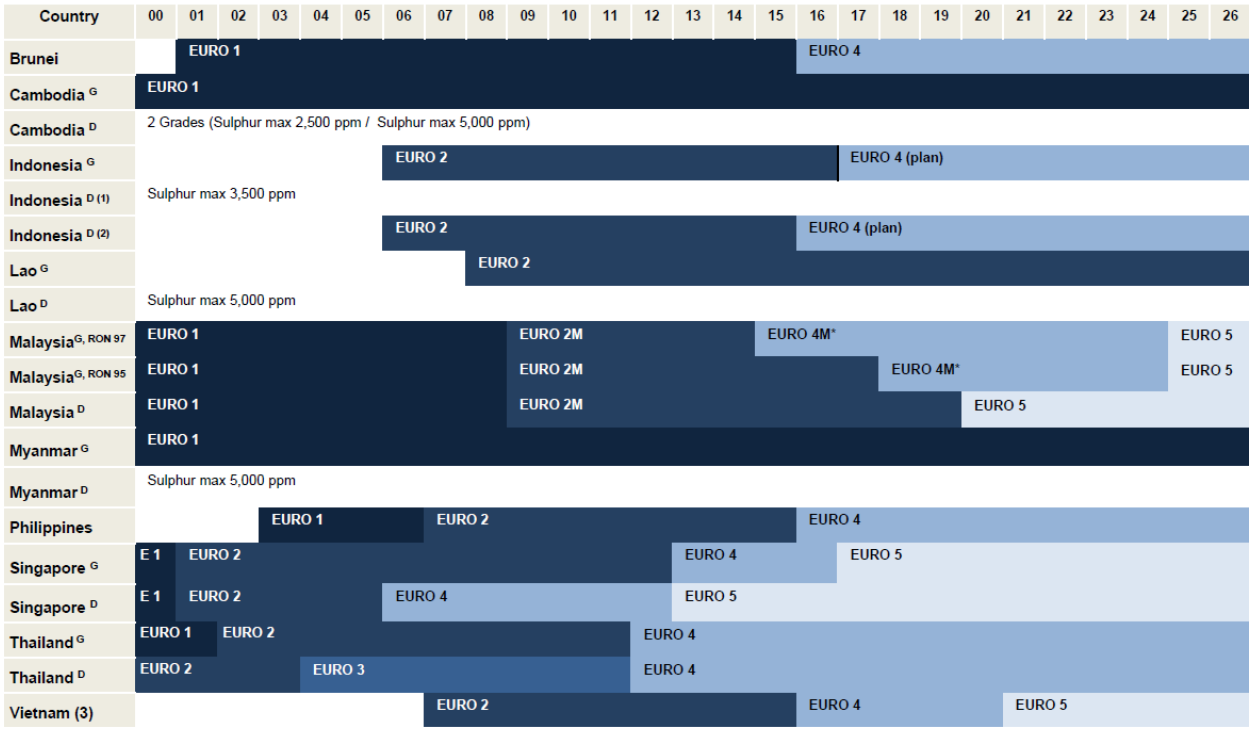
It is important to utilize or revitalize the existing institutional platforms that may be used for oil supply resilience. ASEAN member countries have been working on the ASEAN Petroleum Security Agreement (APSA) for many years, and these countries generally value such regional oil-sharing scheme. However, at the workshop in Bangkok in February 2017, the ASEAN Council on Petroleum (ASCOPE) revealed the uncertain future of APSA after it expires in 2023. The importance of APSA undoubtedly remains, but the uncertainty reflects varied views on the wide scheme among member countries of the ASEAN. Therefore, it may be realistic to start with an oil-sharing scheme by selected countries that are willing to participate. In this sense, it is worth considering an international cooperation on stockpiling facility and crude oil terminal in Kalimantan that Indonesia is planning to develop. Another example of existing platform is the Joint Organizations Data Initiatives by the United Nations, IEA, Asia-Pacific Economic Cooperation (APEC), and other international organizations that aim to develop oil and gas statistics worldwide. Statistics by itself does not enhance oil supply resilience. Nevertheless, it is important to have reliable and timely statistics on demand, supply, stock, and international trade of crude oil and oil products to help markets to function properly and, thus, avoid any unnecessary price shoot or collapse due to lack of market data.

In terms of institutional and legal framework and industry effort like BCPs, Japan could be of help to ASEAN member countries. METI already commits international cooperation on oil supply security with ASEAN through multiple channels. Japan Cooperation Center Petroleum expressed the possibility of giving training courses relevant to oil supply resilience. Japanese experience, especially on the importance of communication and coordination, can at least provide a platform framework that ASEAN member countries can customize and implement according to their own

situations and needs for their oil supply resilience. As far as the BCP is concerned, it is worth aligning any BCP with ISO 22301, which stipulates business continuity management for the sake of standardization across countries or even the region.

Other cooperation areas include gasoline and diesel quality standards in the ASEAN region. At the Bangkok workshop, PTT pointed out that the different qualities of gasoline and diesel undermine the flexibility of international transactions, and standardizing the quality will contribute to enhancing the liquidity of gasoline in the ASEAN region.

Figure 3-1: Gasoline and Diesel Quality Standards in ASEAN Member countries



Source: PTT (2017).

Oil supply security and resilience will remain pressing issues in the ASEAN region, given the strong demand for oil, the sluggish supply growth, and the various supply risks. Currently, the oil market is in a glut, but it will tighten in the future because of its cyclical nature. Some supply risks, such as natural disasters, are unfortunately inevitable. Therefore, governments and industries in the ASEAN region should be prepared and resilient to any forthcoming supply insecurities to minimize human casualties and to sustain a sound society and economy in their respective countries.