

## Foreword

The concept of resilience has gained wide attentions in the past 10 years. Its application extends to various disciplines – from civil engineering to infrastructure construction, macroeconomics, corporate strategy, and even psychology. The essence of resilience is to enhance not only resistance but also recovery capabilities. Higher resilience means that when one is impacted by a negative shock, the resilience itself can minimize the impact and recover the original status in a shorter period. Therefore, resilience has a comprehensive nature that includes both preventative actions from negative shock and mitigation actions of the negative impact.

Resilience is also a useful concept in the effort to enhance oil supply security. Building stockpiling or soil improvement to absorb the impact of earthquake is a traditional measure for oil supply security. The concept of resilience tells us that deploying ‘hard’ measures is very important but not sufficient enough to maintain a stable oil supply in case of emergency; ‘soft’ measures, such as streamlining communication and business continuity plan (BCP) to promptly restore the original supply, are equally important.

As a result of the Great East Japan Earthquake in 2011, Japan experienced supply disruption of oil products, gas, and electricity in some region. The government and the industry had a comprehensive review of their energy policies after the event. Domestic oil supply has been one of the issues, and a set of measures were taken to ensure the stable supply and the swift recovery in case of disruption. The concept of resilience was introduced in this context, and the concept is still evolving as will be mentioned in this report.

Meanwhile, oil demand in ASEAN countries is growing rapidly. Yet, oil stockpiling and other security measures have not been developed to the level of OECD countries. Many ASEAN countries are exposed to various risks of supply disruption, such as natural disasters, accidents, and terror attacks. This study reveals that the countermeasures and preparedness for these risks are not adequate.

Taking the above situation into consideration, this study aims to share with the ASEAN the experience of Japan in oil supply resilience. This includes understanding the current status of relevant oil supply security activities in the ASEAN region, identifying the required actions to enhance resilience in oil supply security, and finally, proposing measures to enhance oil supply resilience in the region. The oil supply resilience in Japan will be reviewed in Chapter 1 while the same resilience in Southeast Asia will be examined in Chapter 2. Both chapters will look at oil demand, industry structure, regulatory bodies, supply risks, and countermeasures. Chapter 3 will

summarize the discussion, analyse what additional measures are needed, and explore the possible areas for international cooperation.

Mr Shigeru Kimura

Dr Tetsuo Morikawa

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The Authors