# Chapter **3**

**Risk Mitigation Measures and Strategies** 

November 2016

## This chapter should be cited as

ERIA (2016), 'Risk Mitigation Measures and Strategies', in Kimura, S., T. Morikawa and S. Singh (eds.), *Sea Lane Security of Oil and Liquefied Natural Gas in the EAS Region*. ERIA Research Project Report 2015-14, Jakarta: ERIA, pp.39-40.

# Chapter 3

## **Risk Mitigation Measures and Strategies**

The trends, nature, and causes of key maritime risks were discussed in Chapter 2. While the dynamics of each varies by geography, some overarching measures and strategies can help mitigate risks in maritime trade, particularly those of energy. The risk mitigation measures for piracy, terrorism, and regional conflict have an overlap, which is why they have been grouped in one section. This is followed by measures to mitigate congestion and accident risks, and finally, risks due to extreme weather events.

#### 3.1. Piracy, terrorism, and regional conflict

1. Electronic identification tags to monitor vessels should be developed and common codes should be used internationally to ensure successful monitoring of sea lanes by various maritime security agencies.

2. Regional agreements should facilitate joint naval, coast guard and ground operations, and 'hot pursuit' chases of pirate vessels. Further, there should be a consolidation of forces and coordination of activities where possible. Coast guards and navies of various countries should work together to fight both illegal fishing and underground market for petroleum products.

3. Private security agencies should be regulated under an international or regional treaty agreeable to all participating countries. Such a treaty should also include floating armouries to ensure the regulation of privately held arms in international waters.

#### 3.2. Congestion and accidents

1. There will be a need to implement an integrated accident risk management approach and prepare joint contingency plans in case of closure of the straits. Contingency plans need to be constructed after thorough risk assessments of the environmental, social and economic impacts of accidents in the straits. An expert and steering committee can conduct a quarterly review of the risk assessment framework. As an outcome of this assessment, a security incident multi-layer reporting system and network should be developed.

2. The development of alternate channels for maritime trade in the case of blockages caused due to spills and accidents. In the case of Asia, the Lombok Strait and other straits in the region must be developed as alternates to the Strait of Malacca. Development of aids to navigation and patrolling of coast guards at sea in these alternate straits will be particularly critical.

#### 3.3. Extreme weather events

1. Investing in the latest weather forecasting systems and developing channels of communication to ensure dissemination of accurate information regarding extreme weather events will be necessary. Early warning systems, communication with disaster management teams, and alternative navigable routes should be disseminated regularly to all sea lane navigators and crew members.

2. Compilation of and training in best practices in navigating in times of extreme weather events will be valuable to ensure delays and damage due to such events is minimised.