

Cooperative Response to Marine HNS Spill Incidents in the ASEAN Region

동남아시아국가연합 지역 내에서의 해상HNS유출사고에 대한 협력 대응

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1. Introduction

Marine HNS pollution from vessels is a serious issue in ASEAN (Association of Southeast Asian Nations) region (Fig. 1). With developing international trade and economic integration among ASEAN countries, the region has undergone significant increase in seaborne transportation. HNS spills have become a common concern to the region, and multilateral cooperations within the region are required for preparedness and response to marine HNS spill incidents. Therefore, a regional program of cooperation in preparedness and response to marine HNS spill incidents should be developed and legal instruments are to be discussed. In this study, the current status of marine HNS spills and multilateral cooperations in ASEAN region will be examined.



Fig. 1. Geographical ASEAN region in HNS and Oil spill response cooperation. (Infonet, 2015)

2. Statistics of HNS Spills in ASEAN Region

There are many marine oil and HNS spills in ASEAN region as shown in Table 1. Interestingly, in 1997 the tanker *Evoikos* collided with Cruder oil tanker *Orapin Global* about 5 km south of the Singapore Port Limit, resulting in 28,463 tons of oil spill from tanker *Evoikos*. In 2008, 1000 tons of Sulphuric acid were spilled from *M/V Princess of the Stars* in Philippines. On 7 July 2010, due to the fire on board *Charlotte Maersk* in the Strait of Malacca, 17.78 tons of Trichloroisocyanuric acid, 13.44 tons of Methyl ethyl ketone (MEKP), and 40 tons of Calcium hypochlorite were discharged into the sea. On Dec 29, 2013, the LNG carrier *Al Gharrafa* collided with containership *Hanjin Italy*.

Table 1. Major HNS and Oil Spills in ASEAN region

Name of Vessel	Type of spill	Spillage (ton)	Year	Incident site (State)
JP4	Crude Oil	1,900	1973	Thailand
Aquarius	LNG	-	1977	Indonesia
Showa Maru	Crude oil	3,300	1975	Singapore/ Indonesia/ Malaysia
Elhami	Crude oil	2,300	1987	Singapore
Neptune Aries	DO, FO	1,800	1994	Vietnam
Evoikos	HFO	28,500	1997	Singapore/ Malaysia
Natuna Sea	Crude oil	7,000	2000	Indonesia/ Singapore
Solar 1	IFO 180	8,000	2006	Philippines
Unknown Spill	Crude oil	3,000	2007	Vietnam
Princess of the Stars	Sulphuric acid	1,000	2008	Philippines
Charlotte Maersk	Trichloroisocyanuric acid, MEKP, Ca(ClO) ₂	17.78 13.44 40	2010	Malaysia
Bunga Alpinia	Methanol	6	2012	Malaysia

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ASEAN supplies around 50 million tons of LNG annually. The solid line on the Fig. 2 shows that the LNG demand as percentage of supply tends to increase (S&P, 2018). In addition, the chemical market in ASEAN region(Fig. 3) is very bustling (Statista, 2015). Besides that, ASEAN region is located in important seaborne trades, where maritime shipping cargoes and energy resources to largest economies of Asia such as China, Japan, and Korea, resulting in greater risk of incidental oil and HNS spills than any region in the world.

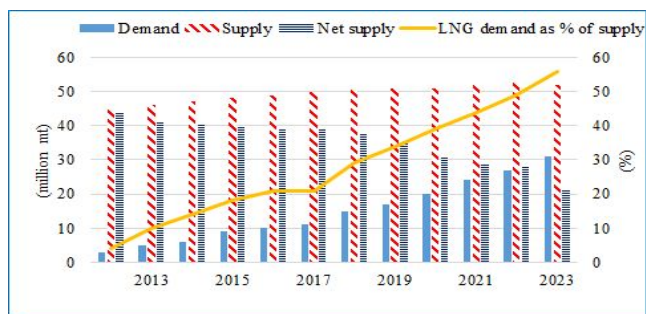


Fig. 2 LNG Demand and Supply in ASEAN region (S&P, 2018)

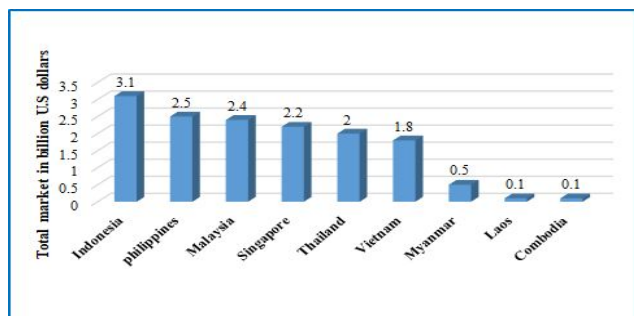


Fig. 3. Chemical market in ASEAN region in 2015, by country in billion U.S. dollars (Statista, 2015).

3. Multilateral cooperations in ASEAN Region

ASEAN had developed its own Contingency Plan for marine pollution due to oil spills in the early 1970s in the Straits of Malacca and Singapore. In addition, Association of Southeast Asian Nations Oil Spill Response Action Plan (ASEAN OSRAP) was initiated in 1991 by Japanese Government. This Action Plan was reinforced through many milestones: Six ASEAN member countries signed a MoU establishing the ASEAN OSRAP in 1993, National stockpiles were reinforced and supported by Japan in 1994, Four new member countries of ASEAN did not sign the ASEAN OSRAP MoU in 1995-1999, Global Initiative Program for

Southeast Asia (GISEA) with four-times Regional workshop was funded by IMO and IPIECA in 2009, 2011 and 2013 to enhance global preparedness and response capacity against marine oil spill. As a result, on 28 November, 2014, the ASEAN Transport Ministers (ATM) signed the MoU on ASEAN Cooperation Mechanism on Joint Oil spill Preparedness and Response during the 20th ATM Meeting in Mandalay, Myanmar. The updated Plan is designed to ensure Control and Mitigation of Marine Pollution. However, this Plan did not concern HNS pollution response in the region while the action plans in other regions such as Northeast Asia (NOWPAP) and South Asia (SAS) are concerned with marine pollution caused by both oil and HNS spill incidents in the context of the regional regime. Therefore, marine HNS spill response cooperation in the ASEAN region seems to be necessary.

4. Conclusion

As marine HNS spill issues become critical in ASEAN region, resulting from the growing quantities of HNS transported by sea, several member states of ASEAN such as Singapore, Malaysia, and Vietnam have developed a combined oil and HNS spill contingency plan. Adding HNS to the ASEAN Cooperation Mechanism on Joint Oil Spill Preparedness and Response (ASEAN OSPAR) will provide multilateral cooperations for response to large-scale oil and HNS spills, which will strengthen the capability of ASEAN member states for response to marine oil/HNS spill incidents. This plan provides response and cooperation policies, and responsibilities of each nation in case of marine spill incident.

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