

THE 9TH CONFERENCE OF THE
INTERNATIONAL SOCIETY FOR
**INTEGRATED
DISASTER RISK
MANAGEMENT**
2–4 OCTOBER 2018
SYDNEY, AUSTRALIA



IDRiM2018 Abstract

Title: Basic Impact Analysis of Maritime Global Critical Infrastructure Disruption Caused by Disasters on the Global Trade and Economy

Theme: Economic aspects

Authors: Yasuhiro AKAKURA and Kenji ONO

Abstract: The highly frequent and stable maritime transportation has contributed great progress of economic globalization. The advanced global supply-chain has been, however, much vulnerable against a disruption of transport. Moreover, world shipping operations concentrate at major straits and canals, which are called maritime global critical infrastructures or chokepoints, and are strategically important from the viewpoint of geopolitics. A closure of any one of these navigation channels will have the devastating impact on the world trade and economy, while these maritime infrastructures are exposed to disruptive hazards such as storm, extreme weather, ship collision, regional strife, explosion accident, terror, cyberattack etc. This study analyses an impact of disruption of maritime global critical infrastructure, such as the straits of Hormuz and Malacca, and the Suez and Panama canals, on the world trade and economy. Among these straits and canals, passing cargoes of the Strait of Malacca was the largest with the estimated total value of over 3 trillion US\$ in 2017. The shares of container cargo value were largest in all straits and canals, however, that of tanker cargo in the Strait of Hormuz also accounted for 40%. The global share of the cargo traffics on the strait of Malacca amounted to over one third except for bulk cargo, and the oil and gas traffics in the strait of Hormuz exceeded 40%. Regarding alternative routes, the detour travel distances for the Suez and Panama Canal were very long, and there is no maritime alternative route for the Strait of Hormuz. As such the impacts of traffic disruptions on the above major straits and canals are considered of great significance on the world trade and economy.