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A Case-Study Analysis on the Necessity of Testing for Cyber Risk Mitigation on Maritime Transport

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Abstract : In recent years, researchers have started to turn their attention to cyber security and maritime security independently, neglecting, in most cases, to examine the areas where these two critical issues are intertwined. The impact of cybersecurity issues on the maritime economy is emerging dramatically. Maritime transport and all related activities are conducted by technology-intensive platforms, which today rely heavily on information systems. The paper's argument is that when no defense is completely effective against cyber attacks, it is vital to test responses to the inevitable incursions. Hence, preparedness in the form of testing existing cybersecurity structure via different tools for potential attacks is vital for minimizing risks. Traditional criminal activities may further be facilitated and evolved through the misuse of cyberspace. Kidnap, piracy, fraud, theft of cargo and imposition of ransomware are the major of these activities that mainly target the industry's most valuable asset; the ship. The paper, adopting a case-study analysis, based on stakeholder consultation and secondary data analysis, namely policy and strategic-related documentation, presents the importance of holistic testing in the sector. Arguing that poor understanding of the issue leads to the adoption of ineffective policies the paper will present the level of awareness within the industry and assess the risks and vulnerabilities of ships to these cybercriminal activities. It will conclude by suggesting that testing procedures must be focused on three main pillars within the maritime transport sector: the human factor, the infrastructure, and the procedures.

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