Callidus News

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THE IMPACT OF WAR AND OTHER INCIDENTS IN THE SHIPPING INDUSTRY

The shipping industry, a critical component of global trade, is often significantly affected by geopolitical conflicts and incidents. Wars, sanctions and other disruptions can lead to substantial challenges for the shipping companies, impacting everything from operations logistics to financial stability.

The Ripple Effect of War

One of the most recent examples is the war in Ukraine, which has caused widespread disruption to global shipping. The conflict has led to the closure of major ports, such as Odessa and a Russian Naval Blockade, trapping hundreds of Vessels and affecting the movement of essential goods. The war has also increased shipping costs and longer transit times, exacerbating supply chain disruptions.

Geopolitical Tensions and Attacks

Geopolitical tensions in key maritime regions have significantly impacted the shipping industry, leading to increased operational costs, re-routed shipping lanes and heightened security concerns. Maritime Conflict: Geopolitical tensions in various regions have led to attacks on ships using sophisticated weaponry such as ballistic missiles, anti–cruise missiles, and drones. These attacks have disrupted global shipping routes, forcing companies to re-route their vessels resulting in delays and increased costs. Critical Maritime Corridors: Critical maritime corridors,

THOUGHT for the MONTH

The sea, once it casts its spell, holds one in its net of wonder forever

JACQUES YVES COUSTEAU

Callidus

which are essential for global trade, have been hotspots for geopolitical tensions. Territorial disputes and military activities in these areas have increased risks for shipping companies, necessitating enhanced security measures and careful route planning. International Response: In response to escalating tensions, international coalitions have launched initiatives to secure maritime navigation and safeguard trade flows. Efforts to protect shipping and restore regional stability have been implemented by various international bodies and coalitions.

Economic Consequences

The economic impact of these disruptions is profound. Increased fuel prices, higher insurance premiums, and the need for additional security measures all contribute to rising operational costs for shipping companies. Additionally, sanctions and trade restrictions can limit access to key markets, further straining financial resources.

Environmental and Humanitarian Concerns

Beyond economic impacts, there are also environmental and humanitarian concerns. The destruction of infrastructure and the release of pollutants during conflicts can have long-term environmental effects. Moreover, the safety of seafarers is a constant concern, as they often find themselves caught in the crossfire of geopolitical conflicts.

The Impact of Sanctions

Sanctions can have a significant impact on the shipping industry, affecting both operational and financial aspects. For instance, recent sanctions imposed by the European Union and Britain on certain national airlines and shipping lines have restricted access to ports and frozen assets. These measures are part of broader efforts to curb support for conflicts.

Sanctions can also lead to increased costs for shipping companies, as they must navigate complex regulatory environments and ensure compliance with international laws. This can result in higher operational costs and potential reputational damage if companies are found to violate sanctions.

- Increased Compliance Costs: Sanctions impose a significant administrative burden on shipping companies. To comply with international sanctions regulations, companies must implement robust compliance programs. This includes continuous monitoring of transactions and thorough vetting of clients and cargo to ensure they are not linked to sanctioned entities, regular training for staff on compliance requirements and updates to sanctions lists, and investment in advanced software solutions to monitor and manage compliance, which can be costly.
- Operational Disruptions: Sanctions can lead to the blacklisting of vessels, companies, and even ports, causing direct operational disruptions. Ships may be barred from certain ports, limiting their operational routes. Ships may need to take longer routes to avoid sanctioned areas, increasing fuel consumption and transit times. Some ports may refuse entry to vessels that have recently visited sanctioned countries, leading to logistical challenges.
- Financial Risks: Non-compliance with sanctions can result in hefty fines and penalties, as regulatory bodies can impose significant fines on companies violating sanctions. Companies found in violation may be denied banking and insurance services, severely hampering their operations. Defending against sanctions violations can lead to substantial legal expenses.
- Reputational Damage: Being linked to sanctions violations can harm a company's reputation, leading to a loss of business and trust from clients and partners. The negative publicity associated with sanctions violations can damage a company's brand and market position.
- Shifts in Trade Alliances: Sanctions can force shipping companies to reassess and alter their trade routes and partnerships. Companies may need to forge new trade alliances to navigate around sanctioned areas. Sanctions can shift market dynamics, leading to increased competition in non-sanctioned markets.
- Humanitarian and Environmental Concerns: Sanctions can have unintended humanitarian and environmental consequences. Sanctions may limit the movement of humanitarian aid, affecting vulnerable populations in sanctioned countries. Rerouting ships can lead to increased fuel consumption and emissions, impacting the environment.
- Recent Examples: Sanctions on certain national shipping industries have restricted their access to global markets and increased operational costs for companies doing business with these nations. Sanctions related to ongoing conflicts have led to increased shipping costs, disrupted trade routes, and created a volatile environment for global shipping.

The Way Forward

To mitigate these challenges, the shipping industry must adopt a proactive approach. This includes investing in advanced security measures, such as armed guards and cybersecurity protocols, and collaborating with international organizations to ensure the safety of maritime routes. Additionally, diversifying supply chains and exploring alternative routes can help reduce the impact of disruptions.

In conclusion, while the shipping industry is resilient, it is not immune to the effects of war and geopolitical tensions. By staying informed and prepared, shipping companies can navigate these challenges and continue to play a vital role in global trade ■

INCREASED COMMERCIAL VESSEL TRAFFIC: A GROWING SOURCE OF POLLUTION IN THE SOUTH CHINA SEA

The South China Sea, a crucial body of water in Southeast Asia, serves as a major international trade route, a geopolitical hotspot, and an environmental concern. Its position as a critical shipping lane between the Pacific and Indian Oceans has made it one of the busiest maritime passages globally, with over one-third of global shipping traffic passing through its waters. As global trade continues to expand, the volume of commercial vessel traffic in the South China Sea has surged. While the increase in shipping activity plays an essential role in facilitating global commerce, it also brings serious environmental risks, particularly pollution. This pollution, largely driven by emissions from commercial vessels, threatens marine ecosystems, local coastal communities, and the region's remarkable biodiversity. The South China Sea is one of the most biologically diverse marine regions in the world, home to extensive coral reefs, fish habitats, and valuable resources, making it vulnerable to the detrimental effects of increased commercial vessel traffic.

The link between the rise in shipping activity and the increasing levels of pollution in the region is undeniable. Air pollution caused by the emissions of harmful gases such as carbon dioxide (CO2) and sulfur dioxide (SO2) is one of the most pressing issues. This pollution has been linked to numerous health problems and significant ecological damage. Since 2013, the quantity of pollution generated by commercial vessels has increased, leading to thousands of premature deaths each year across the region. Air pollution from ships has been directly responsible for the loss of 1,800 lives in China, 4,000 in Japan, 1,000 in Taiwan, and 800 in South Korea.

The Strategic and Ecological Significance of the South China Sea

The South China Sea spans approximately 3.5 million square kilometres, bordered by China, the Philippines, Malaysia, Brunei, Vietnam, and Taiwan. Beyond its importance as a shipping route, the region is also home to some of the world's richest marine ecosystems. The sea's coral reefs, fish populations, and marine biodiversity provide livelihoods for millions of people and contribute to the region's food security. In addition to its biological wealth, the South China Sea contains substantial reserves of oil and natural gas, which add to its geopolitical significance. The South China Sea also functions as a critical trade route for the global economy. It is estimated that around one-third of global shipping traffic passes through this region, including bulk carriers, oil tankers, and container ships. Approximately half of the world's trade fleet transits through the South China Sea each year, which is significantly more than the Suez or Panama Canal. In the Strait of Malacca, for example, traffic volume is more than three times that of the Suez Canal and five times that of the Panama Canal. This high level of maritime activity is driven by the region's heavy dependence on imported oil and the growing demand for raw materials, petroleum products, and consumer goods. However, the growth in shipping traffic has brought with it a host of environmental challenges, especially pollution. Aside from vessel emissions, the region is also grappling with the effects of urbanization, industrialization, and energy production in coastal cities. These activities contribute to deteriorating air and water quality, making pollution one of the most urgent environmental issues in the South China Sea today.

Air Pollution from Ship Emissions: A Growing Concern in the South China Sea

Air pollution from ship emissions is one of the most significant environmental challenges associated with the rising commercial vessel traffic in the South China Sea (SCS). As one of the busiest maritime corridors globally, the South China Sea sees tens of thousands of commercial vessels ranging from oil tankers and bulk carriers to container ships—transit through its waters each year. These vessels are powered primarily by heavy fuel oil (HFO), a low-cost but highly polluting substance that contributes significantly to air quality deterioration, both locally and globally. The emissions from these ships, which contain a cocktail of harmful substances, have profound impacts on human health, and marine ecosystems, and contribute to the broader issue of climate change.

The Key pollutants from ship emissions are: a) Sulfur Dioxide (SO2) emitted by ships burning HFO, which typically contains high sulfur content contributing to the formation of acid rain, which can damage ecosystems, soil, and vegetation, b) Nitrogen Oxides (NOx) emitted during the high-temperature combustion process in ship engines that forms ground-level ozone, a harmful air pollutant that can trigger respiratory problems and other health issues, c) Volatile Organic Compounds (VOCs) emitted from ships carrying oil or chemical cargoes during loading, unloading, and during transit, c) Particulate Matter (PM) such as particularly fine particles (PM2.5) and Black Carbon emitted from ship exhausts which are highly detrimental human health and causes global warming, and Carbon Dioxide (CO2).

The coastal cities surrounding the South China Sea, including major urban centres in China, Vietnam, Malaysia, and the Philippines, are particularly vulnerable to the adverse effects of ship-generated air pollution. Emissions from ships can significantly degrade local air quality, especially in high-traffic zones like the Strait of Malacca and the Gulf of Thailand.

Efforts to reduce pollution and International Response

The international community has increasingly recognized the significant environmental and health risks posed by air pollution from ship emissions, particularly in busy maritime regions like the South China Sea (SCS). As one of the most trafficked sea lanes in the world, the South China Sea is home to vital international shipping routes, which facilitate global trade but also contribute disproportionately to environmental degradation.

A. Role IMO and application of MARPOL

Initially, the IMO or MARPOL convention gave little concern for the emissions from vessels but in the mid-1980s the Marine Environment Protection Committee (MEPC) of IMO discussed the issue of air pollution. In 1990 during the MEPC session a paper was presented by Norway, showing that emissions from ships in the oceans have minimal consequences, however in some routes, such as the English Channel, South China Sea, and Strait of Malacca, emissions cause large environmental issues and this ultimately led to the adoption of the 1997 Protocol which included Annex VI. As per Annex IV IMO implemented a global sulfur cap, and set limits on NOx emissions specifically in Emission Control Areas (ECAs) where air quality is a priority, Further, IMO has developed the Energy Efficiency Design Index (EEDI), which sets energy efficiency standards for new ships.

B. ASEAN's Efforts in Addressing Air Pollution from Ship Emissions in the South China Sea

The Association of Southeast Asian Nations (ASEAN) is a regional organization comprising of most of the littoral states in Chinese waters. ASEAN's approach to tackling air pollution from shipping has been multi-faceted, encompassing policy development, environmental agreements, and regional cooperation with other stakeholders such as the International Maritime Organization (IMO). Some of the measures taken by ASEAN are ASEAN Marine Environment Protection Strategy (AMEPS), The ASEAN Environmental Education Action Plan, Green Shipping Initiatives, etc. ASEAN has been proactive in addressing climate change and its connection to maritime pollution, including emissions from ships. The ASEAN Cooperation on Climate Change focuses on promoting sustainable development and reducing carbon emissions in various sectors, including shipping. ASEAN's efforts to address ship emissions and air pollution in the South China Sea are crucial for protecting both the regional environment and public health. By building on its existing frameworks, enhancing cooperation, and addressing challenges such as geopolitical tensions and uneven enforcement, ASEAN can play a key role in shaping a sustainable future for the maritime sector.

C. Endeavours of the Shipping Industry in Addressing Air Pollution from Ship Emissions in the South China Sea

The global shipping industry, which is one of the largest sources of pollution in the maritime sector, is increasingly being held accountable for its environmental impact, particularly air pollution caused by ship emissions. And there been immense pressure from every nook and corner of the shipping industry to take appropriate measures, as a response to increasing regulatory pressure, environmental concerns, and growing public awareness, major shipping companies have taken a proactive approach to reducing their environmental impact, including tackling air pollution caused by emission. The few endeavours made by the Shipping companies and various stakeholders are;

a. Adoption of Sulfur cap regulation of IMO

in compliance with the International Maritime Organization (IMO) sulfur cap regulations shipping companies in recent years is the adoption of low-sulfur fuels. Major shipping companies have moved quickly to adopt low-sulfur fuels or installed scrubber systems that clean exhaust gases, removing harmful sulfur compounds from the exhaust before they are released into the atmosphere.

b. Usage of Liquified Natural Gas (LNG)

LNG-powered ships or retrofitting vessels to run on LNG are alternatively used by shipping companies to reduce pollution caused by ship emissions. LNG burns cleaner than traditional heavy fuel oil, emitting lower levels of sulfur, nitrogen oxides (NOx), and carbon dioxide (CO2). LNG is now considered a key alternative fuel in the push for reducing ship emissions.

c. Adoption of Alternative Fuels

The use of fuels such as Biofuels, Ammonia and Hydrogen can further reduce emissions and contribute to the industry's transition toward decarbonization. Biofuels emit lower levels of CO2 and other pollutants than conventional fuels. Shipping companies like Maersk are experimenting with biofuels in their vessels. Ammonia produces zero carbon emissions when burned and can be used in existing engines or fuel cells. Similarly, hydrogen is a clean fuel that can be used in internal combustion engines or fuel cells, though it requires significant infrastructure and investment to be widely adopted.

d. Energy Efficiency Measures initiated

Shipping companies have also implemented a variety of energy efficiency measures to reduce fuel consumption and decrease overall emissions, such as Hull Modification, Wind-Assisted Propulsion, Energy-Saving Device, etc.

Geo-political tension and Militarisation of SCS: A hindrance Pollution control on SCS

The growing military presence in the South China Sea, driven by territorial disputes, further complicates environmental protection efforts. Military activities, including the construction of artificial islands, militarization of existing islands, and frequent naval exercises, not only contribute to environmental degradation but also divert attention and resources away from cooperative environmental initiatives. This is because of the Overlapping Territorial Claim among China, Vietnam, and the Philippines, the exercise of absolute hegemony over the region and assertiveness in claiming sovereignty over nearly the entire South China Sea using a policy known as the "Nine-Dash Line," which has been rejected by several other nations and international courts, Rivalry Between the U.S. and China in the region, etc. Military operations in the region, which involve the use of ships, aircraft, and live-fire exercises, contribute additional pollution in the form of fuel emissions, chemical waste, and debris. Hence the militarization of the South China Sea leads to an increase in ship traffic (both military and commercial), intensifying the air pollution from emissions.

Ongoing territorial disputes and pertaining militarisation in the SCS often erode trust between regional actors, which is critical for effective environmental governance. For example, countries like the Philippines and Vietnam may be unwilling to engage in collaborative pollution control efforts with China, given their territorial disagreements. Similarly, China may be reluctant to participate in multilateral frameworks for pollution control that would undermine its control over disputed areas. Additionally, many littoral states in SCS are reluctant to allow international organizations or other nations to oversee or regulate maritime pollution in the South China Sea because of the sovereignty concerns linked to the Chinese waters. These concerns prevent the establishment of regional monitoring and regulatory bodies to track emissions from shipping or enforce stricter pollution controls.

Conclusion

The rise in commercial vessel traffic in the South China Sea is a double-edged sword. While it plays a critical role in global trade and economic growth, it also presents severe environmental challenges. The increased commercial vessel traffic and the pollution from the vessels in the South China Sea are undeniably a major source of pollution, posing significant threats to marine life, biodiversity, and coastal communities. While the region remains a critical hub for global trade, it is essential that all stakeholders, from international organizations like the IMO to regional governments and the shipping industry, work together to mitigate the environmental impacts of pollution. Stronger enforcement of international pollution standards, the promotion of cleaner shipping technologies, and improved regional cooperation are crucial steps in reducing the pollution crisis. Additionally, the territorial disputes among claimant nations—including China, Vietnam, the Philippines, Malaysia, and Brunei—create significant barriers to effective environmental governance and cooperation. Nationalistic interests often take precedence over regional environmental concerns, complicating efforts to create and enforce uniform policies for pollution control. Additionally, the lack of a cohesive multilateral framework for managing pollution and addressing shared environmental challenges means that fragmented regulations and enforcement inconsistencies persist. International actors, including global powers like the United States, and China, and regional players

such as ASEAN, have a critical role to play in reducing the pollution from ship emissions in the South China Sea. While the United States emphasizes freedom of navigation and often engages in military operations in the region, China's assertiveness in territorial claims sometimes undermines efforts for multilateral environmental cooperation. This geopolitical friction prevents coordinated action at the regional level, making it difficult to establish effective standards and regulations to limit the environmental impact of shipping. Despite these challenges, there is a growing recognition of the need for action to protect the South China Sea's environment. Collaborative environmental efforts, particularly those focused on reducing ship emissions and improving marine pollution controls, could benefit the entire region, ensuring a healthier and more sustainable future for both the local populations and the broader international community ■

HOT NEWS

SINGAPORE HALTS EMPTY CONTAINER MOVEMENTS FOLLOWING FORKLIFT OPERATOR INJURY

In a recent safety incident at one of Singapore's busiest ports, operations were temporarily halted after a heavy box fell and injured a forklift operator. This accident has raised serious concerns about the safety protocols in place for handling cargo, particularly empty containers, which are typically stacked at significant heights in port terminals.

The incident has prompted port authorities to review and revise safety measures for handling and moving empty containers. Authorities are focusing on improving operational protocols to prevent such accidents, which can not only injure workers but also disrupt the efficient flow of goods through the port. Singapore's port, which is known for its high throughput and efficiency, is now looking at ways to strengthen training for port workers, upgrade equipment, and reinforce safety measures across operations.

This event underscores the challenges and risks involved in port operations, where heavy containers are constantly being moved in a fast-paced environment. The incident has led to discussions within the maritime industry about the importance of maintaining strict safety standards and ensuring that workers are protected from potential hazards.

The stoppage of empty container movements at the port is expected to be temporary, as authorities aim to implement corrective measures. However, the event serves as a reminder of the need for constant vigilance and adaptation to ensure that safety remains a top priority in the ever-evolving shipping industry ■

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