



Pandemics and the Maritime Arena

The COVID-19 pandemic demonstrated the colossal toll that pandemics can take on every level of society, from the micro level of the individual to the macro level of international relations. Activities in the maritime arena were not immune from these effects. The decimation of the cruise industry, the severe interruptions in cargo and container shipments, and the impact on navies' crew health, operations, and future budgets all demonstrated the sweeping ramifications that pandemics can have for activities in the maritime arena.

The cruise industry's suffering commenced in the early stages of the global pandemic, when several extremely publicized COVID-19 cases aboard cruise vessels obliterated bookings and prompted waves of cancellations. Ports across the world, including in Canada, restricted access to cruise vessels, with Canada outright prohibiting the operations of cruise vessels in Canadian waters for over a year, until November 2021.¹ The impacts of such restrictions extended far beyond denying people the ability to enjoy international cruise travel. Indeed, the cruise industry employs hundreds of thousands of people internationally, as well as several thousand Canadians, ranging from the personnel crewing the vessels to their maintenance staff and booking personnel. For these people, the interruptions to the cruise industry were financially disruptive and potentially devastating.

The economies of port communities that host cruise ships similarly suffered. Since cruise tourists infuse millions of dollars into port communities by visiting attractions, purchasing souvenirs, attending restaurants and bars, and spending money, the loss of this income deprived communities of key support for local businesses and local jobs. While the global cruise industry has had to contend with severe viruses like norovirus in the past, the coronavirus posed a particular challenge given its airborne nature and the consequent difficulty in controlling its spread, particularly in a confined setting like a ship. Moreover, COVID-19 tends to have disproportionately severe health impacts for older adults – the primary demographic group to partake in cruise tourism. While the cruise industry has largely rebounded following the end of these international restrictions, with several Canadian ports anticipating record-breaking cruise seasons in 2024, COVID-19 illustrated the industry's distinct vulnerability to pandemics.

Even more notable was the pandemic's impact on the container/cargo ship industry. The world has become progressively interconnected and interdependent with respect to the distribution and production of goods over the past three decades, as components and parts for products are sourced internationally and many other products are manufactured in other countries with lower labour costs. The rise of e-commerce has expanded markets internationally, as well as widening consumers' access to products from around the globe. Companies have thus created intricate international supply chains, premised on the "just enough, just in time" strategy of production, allowing them to minimize their inventories and dispatch shipments just as they are needed. Historically, this principle has been effective and efficient, successfully reducing storage costs and generating economies of scale that thereby reduce prices for consumers. In accordance with this

principle of business, shipping cargo aboard container ships has become a crucial feature of international economies and ensuring citizens' access to goods that are critical for their daily lives.

The COVID-19 pandemic illustrated the tremendous ramifications that pandemics can have on the interconnectivity of the international economy. Upon the initial discovery of the coronavirus in China, the Chinese government implemented a lockdown of Wuhan in Hubei Province, which was the epicentre of the outbreak, and shuttered factories elsewhere in the nation. Given that China is a major producer of manufactured goods in the world, these closures had widespread impacts. Since factories were closed, they were no longer producing goods, and thus there were few goods to load into containers and onto ships for transport to international markets. Then, as the pandemic crept across international borders and found its way to all reaches of the globe, China resumed production while the rest of the world shut down. Though the supply issues were now remedied, demand issues took their place, since factories around the world could not utilize Chinese components (given their own closure) and lockdowns prohibited consumers from being able to purchase Chinese-sourced goods in local stores. Cargo shipments from China resumed but piled at international ports.

Transporting that cargo from the ports via truck was now an issue, too, given the tightening of international borders in response to the pandemic's spread and truck drivers' hesitation to travel into cities, regions, and countries experiencing surges in cases. Even those drivers willing to make the treks experienced difficulties, as stores and gas stations prohibited them from utilizing their facilities or outright refused to serve them. Moreover, given the closures of factories internationally, drivers found themselves delivering cargo to workplaces in which there were no employees to accept or process the incoming cargo, and which had no outgoing cargo of their own to ship. Since the movement of container shipments is at the expense of the receiving company (e.g., the receiving company pays for the containers to be loaded onto a ship and transported to a port for unloading, whereupon the ship then receives another load of full containers to transport onwards, at the expense of the next receiving company), such a lack of goods to transport interrupts this steady flow of container shipments. In addition to producing logistical difficulties due to the accumulation of empty containers at ports, where they block and hinder operations, the lack of products to fill containers means that there is no receiving company to assume the expense for the next leg of the containers' transit, leading to one receiving company footing the costs for the containers' transit in both directions. Those higher shipping costs increase the price of the cargo and, inevitably, are passed along to consumers. Ports may experience further logjams and delays if dock workers refuse to unload and interact with vessels arriving with cargo out of fear of potential exposure.

Global pandemics can also impact shipping in the maritime arena through their disruption of alternate methods of transporting goods, as evidenced in the COVID-19 pandemic. Although perishable and high-value products are generally transported by air, often as cargo in passenger flights, interruptions to the air transit industry during the pandemic with the cancellation or restriction of flights produced drastic increases in air freight rates. More goods were consequently transported by ship – even perishable items, which was problematic given the extended transit times required for shipping via vessel as opposed to airplane – and thus a wider range of goods encountered the aforementioned challenges.

Pandemics furthermore interrupt maritime shipping on a more individual, personal level. International pandemics like COVID-19 often induce border closures, travel restrictions, port quarantines, and air transit cancellations. Such closures of key points of entry in turn deny crews the ability to go ashore, producing serious implications like the inability to change crews in the event that the new crew cannot arrive or the old crew cannot depart. This inability to change crews creates humanitarian concerns respecting the crew's well-being, as well as concerns about the potential safety ramifications stemming from the crew's resultant fatigue.

Much as pandemics can impact the crewmembers aboard cargo and shipping vessels, they also can have significant repercussions for naval activities and operations. As with commercial vessels, navies encounter difficulties in isolating crewmembers prior to their deployment, as they too may be exposed to illness in the communities in which they live. As a result, in the early months of the COVID-19 pandemic, naval crews were isolated for two-week periods prior to their deployment to ensure, as much as possible, that no crewmember boarding the vessels was infected. Still, despite such precautions, several navy ships reported cases of coronavirus amongst their crews. Indeed, naval operations present distinct challenges in minimizing the spread of illnesses like COVID-19, given the tight quarters that render social distancing difficult, sickbays that were not equipped to accommodate large numbers of infected and infectious personnel, and, in the case of COVID-19, the potential for a crewmember to be infectious for several days before symptoms arise and their infection is apparent.

This combination of factors led to cases like that of the US Navy aircraft carrier USS *Theodore Roosevelt* in 2020. Following a port call at Vietnam, one crewmember tested positive for the virus in late March. Though he was airlifted from the vessel, and most of the 4,900 crewmembers were subsequently removed from the vessel after several weeks to isolate in Guam, over 1,000 – or nearly 20% – of USS *Theodore Roosevelt*'s crew contracted and tested positive for the virus.²

When a virus or illness strikes a naval crew so intensely, it can render the vessel inoperable. Precautionary measures taken to avoid exposure to viruses can similarly remove vessels from service. Indeed, at the beginning of the COVID-19 pandemic, two of Canada's Maritime Coastal Defence Vessels sailed home early from exercises off the West African coast, while two others bowed out of a counter-narcotics mission in the eastern Pacific Ocean to return home. Both withdrawals were not in response to infections among the crews but rather were a precaution. Such removals of vessels from operations and exercises not only diminishes the Canadian Armed Forces' capability and presence but also reduces the RCN's ability to train and practice their interoperability with allied navies. Pandemics can thus curtail a navy's ability to exercise its three key roles of naval diplomacy, constabulary, and warfighting.

Finally, pandemics also wreak havoc on naval budgets, specifically with regards to the budgets for the procurement and production of naval vessels. For instance, in Canada, the National Shipbuilding Strategy (NSS) continues to invest billions of dollars into revitalizing and recapitalizing the Canadian naval and coast guard fleets. Not only can pandemics impact such construction projects by potentially diverting funds and reallocating money from shipbuilding to the pandemic response efforts, but illness and its spread cause delays by interrupting global supply chains, increasing inflation, producing workforce challenges, and forcing temporary shutdowns in construction if workers are infected.³ Therefore, global pandemics can significantly disrupt operations and activities in the world's maritime arena, impacting maritime leisure, economic, and

security and defence activities. As the COVID-19 pandemic has illustrated, these disruptions can take several months and in some cases years to iron out.

References

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² Oren Liebermann, “Leadership Failures Led to Major Covid Outbreak on Aircraft Carrier, Watchdog Report Finds,” CNN, February 8, 2021, <https://www.cnn.com/2021/02/08/politics/watchdog-report-covid-outbreak-roosevelt/index.html>.

³ Michael Gorman, “Halifax Shipyard Extends Shutdown After COVID-19 Case, All Workers to be Tested,” CBC News, February 26, 2021; Public Services and Procurement Canada, “2021 Annual Report: Canada’s National Shipbuilding Strategy,” Government of Canada, <https://www.canada.ca/en/public-services-procurement/services/acquisitions/defence-marine/national-shipbuilding-strategy/reports/2021-annual.html>.