



## PANDEMICS AND THE MARITIME ARENA

The novel coronavirus pandemic and the response to it have had major effects on our lives – both personal and economic. While these are the focus in the daily news, we can't forget that the coronavirus has had an effect on every sector of the maritime industry as well: the cruise ship industry has been decimated and halted its operations; cargo/container ships have canceled sailings; and navies have been affected in the health of personnel, their work and their future budgets. This Briefing Note will examine these factors.

First, let us discuss the cruise ship industry. After a number of well-publicized cases of coronavirus on board cruise ships, the industry has lost bookings by the thousands. Many ports, including in Canada, have now placed restrictions on cruise ship visits in 2020. The entire cruise ship season for 2020 may be cancelled. Why would we care? Aside from the fact that many Canadians enjoy taking cruises, the cruise ship industry employs thousands of people – including for example, crews onboard the ships, maintenance people and booking personnel. But perhaps more significantly, the cancellation of cruise ship visits will have a huge impact on the tourism industry in ports where they stop. As Briefing Note #1 (Canada as a Maritime State) notes, the cruise ship industry brought over a million tourists to Canada in 2019, and they visit the local attractions, buy souvenirs, visit bars and restaurants and spend money, providing income to local businesses and creating jobs.

Cruise ships have had experienced deadly viruses before – norovirus, for example – and this has led to cruise lines adopting strict protocols for cleaning. The industry has bounced back from norovirus outbreaks. Unlike norovirus, coronavirus is spread by droplets, so it's harder to stop the spread once it is on a ship. As well, COVID-19, the particular illness that comes from coronavirus, tends to affect older people more seriously than younger people, and older people are often the demographic group that takes cruises. When the dust settles from the coronavirus, it is hard to know what will happen with the cruise industry.

Second, and more importantly, is the cargo/container ship industry. If there are two things that illustrate the interconnection and interdependence of the world today, they are pandemics and shipping. In the past 30 years, the world has become very interdependent in terms of production and distribution of goods. Where once a car, for example, was manufactured in one place, now it can receive parts from a variety of global sources and can be produced where labour costs are low. Owners, sellers, buyers and producers can all be located in different places, often scattered around the world. Companies have established global supply chains based on the principle of 'just enough, just in time,' and have adopted policies to keep inventories low, and shipments are timed to the exact moment of need. In general, this works well, and is tremendously efficient (by eliminating storage costs and creating economies of scale) so it reduces the price of goods for consumers. It also makes the shipping of cargo via container ships a vital element of our lives.

What happens when the world experiences a pandemic? If this occurs, the interweaving of the global economy can begin to fray. When COVID-19 was first recognized in China, the Chinese authorities locked down the city and province that was at the centre of the outbreak. They also shut down factories elsewhere in the country. And because a significant proportion of the world's manufactured goods is produced in China – including, as we're seeing, much of the

medical equipment countries need to fight COVID-19 – effects began to ripple around the world. Because factories weren't operating, goods weren't being produced, and that means that ships were not being loaded with containers to transport to markets.

Now that China has begun to get back to work, the rest of the world had shut down. So, instead of not getting goods delivered from China, China now has goods that no one can buy and factories can't use because they're in lockdown. Shipping companies began taking cargoes from China again, but now they found logjams at the other end of the trip. Now cargo ships were arriving at ports in Europe and North America, only to encounter problems. One problem is that goods can't get moved by truck from ports because borders have been tightened and truck drivers are unwilling to go to areas where coronavirus is rampant (like Italy, Spain, New York). As well, truck drivers have complained about not being treated well as they travel – gas stations, stores refusing to serve them or allow them to use the facilities. And even if drivers can be found and can overcome difficulties of travel, they often can't get cargos because no one is working at factories to hand over cargo, or process incoming containers, and there is no outgoing cargo because no one is working.

This leads to another problem for shipping. There is a delicate balance of shipping containers and shippers. Full containers are loaded on to a ship, paid for by the receiving company, the ship transports the full containers to a port where they are unloaded. And then the ship receives a new load of full containers, again paid for by the receiving company, to take somewhere else. In the normal scheme of things, containers are moving back and forth full, and not some moving one way and then stopping. If some industries are shut down, then this delicate balance is lost – containers are arriving, but there are no full containers leaving. If the containers are empty, who will pay for their transport? If the receiving company has to pay for containers to travel both ways, that increases the price of cargo. This imbalance creates logistical complications, including the fact that containers can't stay at the port because they clog up operations and ports don't have space to store them.

An interesting corollary is the relationship between air freight and shipping and how that relationship becomes clear when the system is disrupted. Some high-value or perishable goods are transported via air. A lot of cargo is transported in the cargo section of passenger flights. Air freight rates have increased markedly in the past months as airports limit and/or cancel flights. That means more goods are being transported by ships – which is a problem for perishable material because it takes longer – and are subject to all the problems we've already discussed.

Another problem for shipping is that during a pandemic there are travel restrictions, border closures, air travel cancellations and port quarantines. The effect of these is that in many places the crews can't go ashore. This may seem like a small inconvenience, but it has implications. It means that crews can't be changed because the old crew may not be able to fly home, and a new crew may not be able to fly in, and because of the need for quarantine if anyone leaves the ship. That means the same crew keeps working all the time. Aside from the humanitarian considerations, tired crews may lead to accidents. And an additional problem is that in some places dock workers have been unwilling to deal with ships and unload them, particularly if the ship hasn't been at sea for 14 days (the quarantine period for COVID-19).

So, although we may not think of this if we live far from the coast, this disruption to the complex web of shipping will stretch supply chains to the breaking point. Even when we are successful at stopping the spread of COVID-19, it will take months to sort out the chaos in shipping and supplies.

The third element to discuss on the topic of pandemics and maritime issues is navies. How

do pandemics affect navies? There are various elements to this topic. Pandemics affect people, and navies are not immune from this. Navies (as do commercial ships) face challenges in keeping crews isolated for a period of time before they deploy on missions. Crews live in the community and thus are subject to infection just as anyone else is. So, in addition to their time away from their families while at sea, crew members now have to be isolated for two weeks even before going to sea. Because the pandemic is so new, this was not done in the recent past. Thus, in the past month a number of navy ships have had crew members test positive for COVID-19. Because of the possibility of a crew member being asymptomatic for some days before manifesting symptoms, it is easily possible for other crew members to be infected. Ships have tight quarters, and therefore it is difficult to keep social distancing rules. Warships have sickbays but they are not equipped for large numbers of infectious sailors. The best example of a warship being stricken by coronavirus is the US Navy aircraft carrier, USS *Theodore Roosevelt*. When one crew member was found to be positive with COVID-19, he was airlifted off the ship, but it was too late. After several weeks most of the 4,000 odd members of the crew were removed from the ship in Guam to be isolated for 14 days, and more than 400 crew members have now tested positive.

This illustrates that a pandemic can take warships out of service. Two Canadian Maritime Coastal Defence Vessels (MCDVs) left a counter-narcotics operation in the eastern Pacific early to return home, and two other MCDVs returned early from their exercises off the coast of West Africa. None of the ships had sick crew members but they were returned to Canada as a preventative measure. Of the three roles that navies play – warfighting, constabulary and naval diplomacy – all of them were affected. Taking warships away from exercises and operations leads to deterioration of training and operating with other navies, and reduces the presence and capability of Canada’s armed forces.

No discussion about pandemics and navies would be complete without a discussion about budgets. This will be true in all countries, but we’ll look at Canada here. The Canadian government announced the National Shipbuilding Strategy (NSS) 10 years ago to build new ships for the Canadian Coast Guard and the Royal Canadian Navy (see Briefing Note #6 for details about the NSS). The NSS is an extensive and expensive program – ships cost a lot of money. The largest chunk of the NSS budget is dedicated to building 15 frigates for the RCN, the Canadian Surface Combatants. But construction has not yet started on these ships. As the Canadian government starts to distribute billions of dollars in support to Canadians and Canadian businesses that have been affected by the response to the coronavirus, will the billions of dollars for new navy ships get cut? We don’t know.

This is just a brief illustration of how a pandemic affects the maritime arena. Our economy, our security and our leisure activities on the oceans have all been affected by the coronavirus. The effects will be felt for many months even after we get COVID-19 under control.

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