ABSTRACT

Biological invasions pose a severe hazard to ecosystems globally, frequently as a result of human behavior. Non-indigenous species threaten biodiversity and human trade; they are also acknowledged as one of the most serious threats to native biodiversity and ecosystem processes. Ports are most susceptible to marine bioinvasions, due to the alterations in port areas, and the heavy marine traffic that occur there. The International Maritime Organization's (IMO) Ballast Water Management Convention (BWMC) aims to prevent the spread of harmful aquatic organisms and pathogens caused by ballast water movement through ports around the world. As of 2017, 60 countries has acceded to it, with the Philippines signing on in 2018. For compliance, a port biological baseline must be done, and policies in accordance to the convention must be crafted. The study established biological baselines in two of the largest international ports in the Philippines, namely the Port of Manila and Cebu International Port. PICES collectors were used to collect specimen for two years (2021-2022). The Port of Manila showed barnacle *Amphibalanus amphitrite* as the most abundant species, followed by annelids and bivalves. Cebu International Port showed a coral reef community with the present of reef building polychaetes and ophiuroids. The presence of tunicate *Phallusia* indicated the presence of anthropogenic pressures. Both ports showed the presence of non-indigenous and invasive species. A modified local same risk area (SRA) approach was used to determine if the movement between these ports would facilitate transport of non-indigenous species. The results shows that the two ports were not same risk areas, hence the risk in transporting the non-indigenous and invasive species form one port to another is high. Ships navigating between the two ports need to take measures such ballast water treatment to ensure that the species will not spread in the ports. If the ports were same risk areas, there will be no need for measures to prevent spread of these organisms. The study can be used by the Maritime Industry Authority and Philippine

Coast Guard in complying to conventions and crafting policies regarding the use of the same risk area approach in the Philippine setting.