Biofouling Community Composition Along the Coast Adjacent to Colombo Port

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Sri Lanka is located in close proximity to the east-west maritime route with an increased risk of invasion by Non Indigenous Species (NIS) in the coastal waters. Here, Colombo port is one of the top risked ports in terms of potential NIS introductions and the presence of many introduced species remained mysterious until extensive work on biofouling community was initiated in 2014 by the authors. However, knowledge on fouling composition along the adjacent coast around the port is also scarce. Therefore, an extensive survey was conducted along the coast adjacent to the Colombo port to determine the presence and extent of dispersion of NIS. The survey was conducted during the months of May and June, 2018 in both north (Colombo port to Negombo) and south side of the Colombo port (Colombo port to Panadura). Samples were collected using belt transect (10m x 3m) covering both high tide and low tide in the selected sampling locations. Fouling organisms adhere to rocks, piers and floating objects were collected. Organisms which were already identified were recorded at the site itself and new species and any species had doubt on identification, were photographed and transported to the laboratory for further analysis. 42 species of fouling organisms were identified belonging to 7 taxonomic groups as Bryozoa (4 species), Annelida (5 species), Chordata (7 species), Mollusca (8 species), Arthropoda (10 species), Porifera (6 species), and Cnidaria (2 species). Eleven species were common to both side and altogether 24 species were found to be mutual to Colombo port and adjacent coast. Six NIS were recorded which were also observed in Colombo port revealing the presence of NIS in adjacent coast. Therefore, present findings alarm the impending risk of spreading NIS introduced to Colombo port and immediate attention must be taken to manage the existing NIS community in Colombo port as well as continuous monitoring is recommended for possible early detection of future NIS spreading.

Keywords: Colombo port, Adjacent coast, Biofouling, Belt transact, Survey