

## Non-indigenous marine species threatening our ports: Are we ready to tackle them?

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Globalization of trade has resulted in increased levels of long distance travel and frequency of shipping. Subsequently, this has led to extending the distribution of marine non-indigenous species (NIS) into areas where they have never existed, and ultimately driving marine biodiversity towards more homogenized systems. Following their translocation, NIS may spread, establish themselves, and later become invasive alien species (IAS) in native ecosystems. Biofouling occurs due to accretion of undesirable aquatic organisms on submerged surfaces exposed to the marine environment over a long period of time. Presently, biofouling is considered one of the leading causes of marine bioinvasions. The present study was conducted in Colombo Port from October 2014 to October 2016, using fabricated settlement collectors. The existing fouling assemblage, their invasive potential, and the rate of their colonization were investigated.

The study so far has recorded globally known invasive species namely, *Schizoporella errata*, *Watersipora subtorquata*, *Bugula simplex*, *Bugula neritina*, *Balanus amphitrite*, *Botryllus schlosseri*, *Eualetes tulipa* and *Anomia chinensis*. Among these, some species are recorded for the first time in Sri Lanka, and species such as *Schizoporella errata*, *Bugula neritina*, *Eualetes tulipa* and *Anomia chinensis* seem to be already established. Some of these species can later become invasive and have deleterious impacts on biodiversity, by displacing native species and altering community structure, dynamics, and ecological processes. Severe economic implications may arise when these species start to affect natural resource based industries such as fisheries and aquaculture, and foul physical structures such as ship hulls, water intake pipes, and other man-made structures. Therefore, it is very important to recognize NIS and prevent, control, and manage species introduction, before they become IAS. Thus, coastal communities, vessel owners, scientists, policy makers, and government agencies, along with port authorities and environmental organizations, should pay collective attention to this issue.

**Key words:** Marine bio-invasions, invasive alien species (IAS), non-indigenous species (NIS), Colombo Port.