

Marine Invasive Species: Concepts, History, Impacts, and Management Efforts in the Philippines

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ABSTRACT

With the advent of globalization, species are now moving far beyond their natural range of distribution through tourism, transport, and trading. In the marine environment, species are translocated by various vectors such as ballast water, hull fouling, pet trading, and intentional introduction as biocontrol. Species that have been translocated into new habitat where it does not naturally occur and eventually harm the native species are called invasive. They possess specific life traits that enable them to establish a self-sustaining population from lesser founding individuals and confer superior colonizing ability. They can also alter their morphological, behavioral, and physiological activities to adapt to their new habitat. Because they are not subjected to natural population controls (e.g. predator, parasite), they can increase rapidly and tend to outcompete native species. Several studies reported the impact of marine invasive species to biodiversity, economy, infrastructure, human livelihood, and public health. While its impact to the economy can be quantified, the overall negative and irreversible impacts to the environment remain unaccounted. The problem of invasive species has not been fully addressed in developing countries like the Philippines to which only a few studies were conducted in the past 20 years. Though legislation has already been passed to prevent and mitigate the impacts, only a few have been acted upon. Problems affecting the delayed response to this pressing issue include the availability and accessibility of data, lack of technical expertise, and lack of awareness. Hence, baseline research on the taxonomy, ecology, process, and magnitude of impacts is a prerequisite for effective management efforts.