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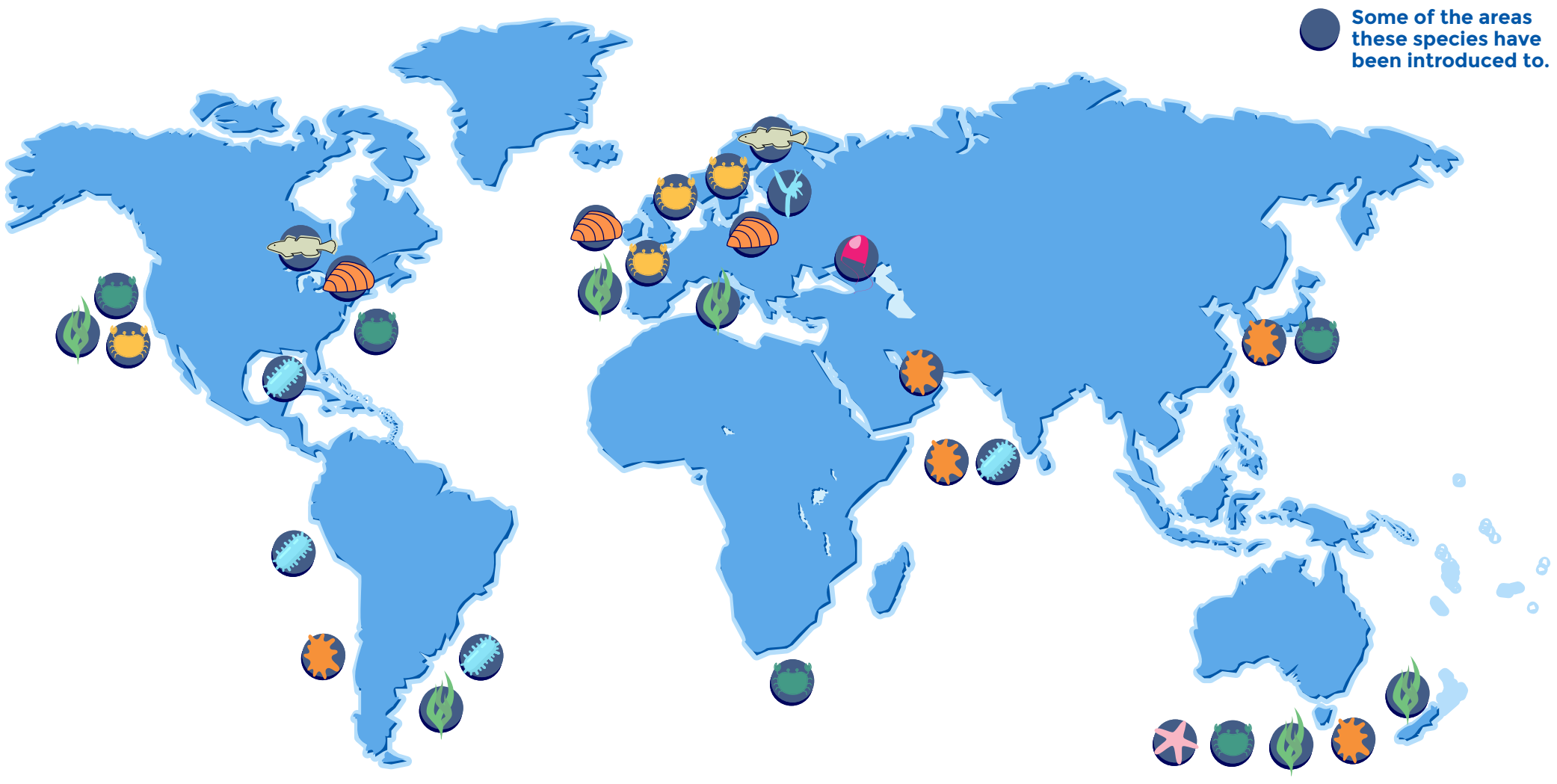
Top 10 Most Invasive Marine Species

Marine plants, animals and microbes are being carried around the world attached to the hulls of ships and in ships' ballast water. When discharged into new environments, they may become invaders and seriously disrupt the native ecology and economy. Introduced pathogens may cause diseases and death in humans.



Cholera
Vibrio Cholerae (various strains)
Native to: Various strains with broad ranges.
Introduced to: South America, Gulf of Mexico and other areas.
Impacts: Some cholera epidemics appear to be directly associated with ballast water. One example is an epidemic that began simultaneously at three separate ports in Peru in 1991, sweeping across South America, affecting more than a million people and killing more than ten thousand by 1994. This strain had previously been reported only in Bangladesh.

Cladoceran Water Flea
Cercopagis pengoi
Native to: Black and Caspian Seas
Introduced to: Baltic Sea
Impacts: Reproduces to form very large populations that dominate the zooplankton community and clog fishing nets and trawls, with associated economic impacts.

Mitten Crab
Eiocheir sinensis
Native to: Northern Asia
Introduced to: Western Europe, Baltic Sea and West Coast North America
Impacts: Some cholera epidemics appear to be directly associated with ballast water. One example is an epidemic that began simultaneously at three separate ports in Peru in 1991, sweeping across South America, affecting more than a million people and killing more than ten thousand by 1994. This strain had previously been reported only in Bangladesh.

Toxic Algae (Red/Brown/Green Tides)
Various species
Native to: Various species with broad ranges.
Introduced to: Several species have been transferred to new areas in ships' ballast water.
Impacts: May form Harmful Algae Blooms. Depending on the species, can cause massive kills of marine life through oxygen depletion, release of toxins and/or mucus. Can foul beaches and impact on tourism and recreation. Some species may contaminate filter-feeding shellfish and cause fisheries to be closed. Consumption of contaminated shellfish by humans may cause severe illness and death.

Round Goby
Neogobius melanostomus
Native to: Black, Asov and Caspian Seas
Introduced to: Baltic Sea and North America
Impacts: Highly adaptable and invasive. Increases in numbers and spreads quickly. Competes for food and habitat with native fishes including commercially important species, and preys on their eggs and young. Spawns multiple times per season and survives in poor water quality.

European Green Crab
Carcinus maenus
Native to: European Atlantic Coast
Introduced to: Southern Australia, South Africa, USA and Japan
Impacts: Highly adaptable and invasive. Resistant to predation due to hard shell. Competes with and displaces native crabs and becomes a dominant species in invaded areas. Consumes and depletes wide range of prey species. Alters inter-tidal rocky shore ecosystem.

Asian Kelp
Undaria pinnatifida
Native to: Northern Asia
Introduced to: Southern Australia, New Zealand, West Coast of USA, Europe and Argentina
Impacts: Grows and spreads rapidly, both vegetatively and through dispersal of spores. Displaces native algae and marine life. Alters habitat, ecosystem and food web. May affect commercial shellfish stocks through space competition and alteration of habitat.

Zebra Mussel
Dreissena polymorpha
Native to: Eastern Europe (Black Sea)
Introduced to: Western and northern Europe, including Ireland and Baltic Sea; eastern half of North America
Impacts: Fouls all available hard surfaces in mass numbers. Displaces native aquatic life. Alters habitat, ecosystem and food web. Causes severe fouling problems on infrastructure and vessels. Blocks water intake pipes, sluices and irrigation ditches. Economic costs to USA alone of around US$750 million to $1 billion between 1989 and 2000.

North Pacific Seastar
Asterias amurensis
Native to: Northern Pacific
Introduced to: Southern Australia
Impacts: Reproduces in large numbers, reaching 'plague' proportions rapidly in invaded environments. Feeds on shellfish, including commercially valuable scallop, oyster and clam species.

North American Comb Jelly
Mnemiopsis leidyi
Native to: Eastern Seaboard of the Americas
Introduced to: Black, Azov and Caspian Seas
Impacts: Reproduces rapidly (self-fertilizing hermaphrodite) under favourable conditions. Feeds excessively on zooplankton. Depletes zooplankton stocks; altering food web and ecosystem function. Contributed significantly to collapse of Black and Asov Sea fisheries in 1990's, with massive economic and social impact. Now threatens similar impact in Caspian Sea.

Source: IMO