Stowaway species threaten biodiversity

October 3 2014, by Claire Snegaroff

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In the early 1980s, the North American comb jellyfish quit its Atlantic home, hid away in the belly of a cargo ship and headed for the Black Sea.

By just over a decade later, its descendants had decimated the anchovy

population in their new surroundings—a jellyfish heaven with unlimited food in the eggs and young of other fish... and not a natural predator in sight.

Invasive hitchhiker species constitute "one of the most significant threats to the marine environment in modern times," says International Maritime Organisation (IMO) head Koji Sekimizu.

Sometimes microscopic in size yet devastating in impact, these organisms can swiftly colonise new marine habitats, wrecking ecosystems on which humans also depend.

Yet 10 years after the world agreed on a key tool for dealing with the problem, the IMO's Convention on the Control and Management of Ships' Ballast Water and Sediments has not been ratified by enough sea-faring countries to enter into force.

It must be adopted by at least 30 countries representing no less than 35 percent of global merchant tonnage.

So far 40 nations, notably excluding seafaring giants Panama, Greece and China, have ratified the mechanism—but they represent just over 30 percent of tonnage.

The convention would be "a powerful legal instrument," said Sekimizu, with measures including mandatory onboard ballast water treatment facilities.

"I am encouraging all IMO member governments to ratify the convention," he said in a video posted on the organisation's website last month. "The timing is now crucial."

Fishy hitchhikers proliferate

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According to green group WWF, over 10 billion tonnes of water are moved around the world in ballast tanks every year—pumped in at Shanghai or Tangiers and dumped in the harbours of Rotterdam or Valparaiso to rebalance the ships as they load or unload cargo.

In this manner, some 7,000 species of fish, crustaceans, algae, invertebrates and even viruses and bacteria, travel unnoticed across the world's oceans every day.

The intruders can wreak havoc with fisheries, aquaculture and water supply—affecting large industry but also local communities that rely on these marine ecosystems for subsistence.

Many species flourish in a new environment, "in the absence of

population-regulating factors that existed in their natural home," explained Daniel Masson of the French sea research institute Ifremer.

This could include disease-causing germs, predators or parasites.

"Once the alien species is in place in the marine environment, there is no way to get it out," added WWF marine manager Simon Walmsley.

"It competes with indigenous species and often outcompetes."

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Global economic losses in 2004/05 exceeded $7 billion (5.5 billion

euros), according to a WWF report entitled "Silent Invasion".

"And the movement has accelerated with globalisation over the last 30-odd years," according to Masson.

The WWF has appealed for widespread ratification of the convention, saying invasive species inflict a "potentially devastating impact on ecology and economy in areas where they do not belong."

Part of the problem has been the money and time it would cost shipowners to filter out and kill invasive species in ballast water.

"It is an agreement that costs money," said Damien Chevallier, head of the French-based office for shipping regulation and safety evaluation.

"It represents an additional cost of about a million euros per ship," he said.

But for the WWF, the cost of doing nothing will be much higher, both for biodiversity and people whose livelihoods depend on the sea.

"The consequences are continuing alien invasions at huge environmental as well as socio-economic cost," said Walmsley.

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