

# Summary

AFS Policy Statement #24:  
Ballast Water Introduction  
(Abbreviated)

The introduction of exotic organisms around the world through the dumping of ballast water by sea-going vessels has resulted in widespread ecosystem changes and large economic costs. As a consequence, inland seas, estuaries, and bays are among the most threatened ecosystems in the world today in terms of loss of their biological integrity.

Most large sea-going vessels use ballast water for stability and maneuverability, typically pumping water into ballast tanks at one port and then discharging it when taking on cargo at another port. Cargo ships may carry 1-8 million gallons of water as ballast so it is not surprising that a host of local organisms, usually in their planktonic life history stage, are transported in it. The ability of ships to transport organisms in ballast water has increased in recent years by (1) development of separate tanks just for ballast water, (2) increases in ship size and amount of water being transported, (3) increase in ship speeds, and (4) increase in ship traffic. Ballast water from a single ship at the time of dumping can contain literally hundreds of species of phytoplankton, zooplankton, and larval fish and invertebrates.

The ecological effects of most of these introductions is not known, but bay and estuarine faunas around the world are becoming increasingly homogeneous as endemic species decline and exotic species increase. Ballast water species have been demonstrated to cause major economic damage such as closing intakes to power plants and altering food chains which support sport and commercial fishes. The zebra mussel alone has cost communities around the Great Lakes millions of dollars in order to protect their water supplies; it is continuing to spread and now occurs throughout the Mississippi River drainage. The problems created by such introductions are recognized in Article 196 of the United Nations's Law of the Sea convention, which states that "States shall take all measures necessary to prevent, reduce and control...the intentional or accidental introduction of species, alien or new, to a particular part of the marine environment, which may cause significant and harmful changes thereto."

AFS recognizes that eliminating ballast water introductions is difficult and likely to impose high costs on the shipping industry, but it also recognizes that the economic and ecological damage done by ballast water introductions is a very real cost of oceanic shipping. AFS also recognizes that given our increased knowledge, ballast water introductions can no longer be regarded as accidental introductions but as deliberate, preventable introductions. AFS regards ballast water introductions as a form of pollution, and the shipping industry as polluters who are externalizing the cost of their pollution.

The AFS policy regarding ballast water introductions is to:

1. Keep the U.S. Congress and state and federal fisheries agencies aware that ballast water introductions represent intolerable threats to the integrity of lake, estuary, and bay ecosystems that need to be dealt with decisively.
2. Encourage the development of control measures to eliminate the immediate, serious, and ongoing problems with ballast water introductions.
3. Encourage the development of economic incentives to make the shipping industry cease and desist the introduction of ballast water organisms.
4. Encourage studies to find ways to halt the spread of nonindigenous organisms.

# Summary

5. Support the intent of the Nonindigenous Aquatic Nuisance Prevention and Control Act and assist the U.S. Congress, other federal, state, provincial, and private agencies to find solutions to problems of introductions of exotic species.

6. Work with international organizations such as the Food and Agriculture Organization and the International Maritime Organization of the United Nations, and the International Council for Exploration of the Seas in order to focus attention and to seek alternative solutions to ballast water introductions on a worldwide basis.

7. Encourage and support studies that predict long-term system effects of established, introduced species and that explore the use of "natural" control measures.