Cleaning to avoid spreading

How to prevent the spread of aquatic invasive species

Votre gouvernement

Québec

Cleaning to avoid spreading invasive species

Cleaning your equipment, at a safe distance from any body of water, will help to preserve a balanced environment. Help prevent the spread of invasive species by following these four steps when or before visiting a new body of water.

Inspect

any equipment that has been in contact with the water and remove all living organisms

Drain

any water found in or on your equipment (boots, nets, coolers, etc.) and in your watercraft before you leave

Clean

and dry your equipment

Repeat

these steps each time you plan to visit a new body of water

“ To help preserve the environment, I respect the precautionary principle and apply eco-gestures as required.”

What is an AIS?

An aquatic invasive species (AIS) is a plant, animal or micro-organism (virus or bacterium) introduced outside its natural range, whose establishment or propagation poses a threat for the environment, the economy or society.

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Spiny water flea

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Eurasian watermilfoil

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Impact of the zebra mussel on some structures

Aquatic invasive species to watch

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Spiny water flea

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Eurasian watermilfoil

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Quagga mussel

Zebra mussel

© Amy Benson

Oriental mystery snail

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Water chestnut

© Pascal Stucki

Asian clam

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New Zealand mud snail

Forêts, Faune et Parcs Québec

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Impacts

In many regions of the world, AIS have had a significant impact from a social, ecological and economic points of view. The Convention on Biological Diversity considers AIS to be the second greatest worldwide threat to biodiversity, after habitat destruction. Once an AIS population has become established in an ecosystem, it is difficult, if not impossible to eradicate it, and controlling it entails a significant and recurrent expense.

SOCIAL IMPACTS

- Threat to human health and the health of native species harvested or used by the human population.
- Reduction in water quality.
- Loss of enjoyment, as users can no longer use a body of water for activities or the harvesting of resources.

ECOLOGICAL IMPACTS

- Degradation of ecosystems.
- Changes to the structure and composition of communities of aquatic organisms (predation or competition with native species).
- Loss of ecosystem functions of benefit to humans (ecological services).
- Introduction of vectors for parasites and pathogens.
- Erosion and the disturbance of sediments, increasing water turbidity.

ECONOMIC IMPACTS — COST ASSOCIATED WITH AIS:

Worldwide	Worldwide US$1,400 billion, or 5% of worldwide GDP
Canada	US$5.5 billion each year

SUMMARY OF DECONTAMINATION METHODS

Method	Concentration	Pressure	Treatment time on each surface to dislodge living organisms
Steam cleaning*	Steam > 60 °C	2,600 psi	5-10 seconds
Hot water*	60 °C 60 °C	Low pressure 2,600 psi	10 minutes 5-10 seconds
Cold water	< 40 °C	2,600 psi	30 seconds
Chlorine or bleach (not concentrated)*	100 ml/l	-	10 minutes
White vinegar (100%)*	75 ml/l	-	20 minutes
Air drying*	Humidity < 65%	-	5 consecutive days
Freezing*	Between -9 and 0 °C Below -9 °C	- -	24 hours 8 hours

** Helps kill aquatic organisms if the guidelines are followed.*