

➤ Remove zebra mussels from boats, engines and equipment

Steam clean

High-pressure steam cleaning will remove the majority of the mussels and kill the remainder. The temperature needs to exceed 40°C. Steam cleaning facilities are available at most filling stations for a small fee. The material removed should not be allowed to enter a water body of any sort.

Clean outboard motors

Flushing removes cooling water that may contain larvae. Attached individuals can be removed manually. Storing outboard engines will drain much of the water, then leave to dry for at least three weeks. Heavily fouled motors should be serviced.

➤ Anglers

Equipment

- Ensure that all equipment is fully dried out or immersed in hot water before use in a different water body.
- Ensure keep nets or landing nets do not have zebra mussels attached.

Bait

- Do not return bait bucket water to an uninfected lake.
- Do not re-use bait if it has been exposed to infested waters.
- Do not use zebra mussels as bait in uninfected waters.

Water

- Do not transfer water from an invaded lake to an uninfected lake.

These practices will also help prevent the spread of aquatic weeds and fish diseases.

➤ Further Information is available on www.ni-environment.gov.uk and www.invasivespeciesireland.com

If you find zebra mussels outside the Erne system and Lough Neagh please contact:

Mr John Early
NIEA
Klondyke Building
Cromac Avenue
Gasworks Business Park
Belfast BT7 2JA
Tel: (028) 9056 9556
Fax: (028) 9056 9624
Email: john.early@doeni.gov.uk

Dr Robert Rosell
Agri-food and
Biosciences Institute
Newforge Lane
Belfast BT9 5PX
Tel: (028) 9025 5506
Fax: (028) 9025 5504
Email: robert.rosell@afbini.gov.uk

The zebra mussel control initiative is supported by the following organisations:

- Northern Ireland Environment Agency (NIEA), Department of the Environment
- Agri Food & Biosciences Institute (AFBI)
- Northern Ireland Water
- Lough Neagh Advisory Committee
- National Parks & Wildlife Service (NPWS)
- Queens University Belfast (QUB)
- Inland Fisheries, Department of Culture, Arts & Leisure
- Waterways Ireland

Our aim is to protect, conserve and promote the natural environment and built heritage for the benefit of present and future generations.

Northern Ireland Environment Agency
Klondyke Building
Cromac Avenue
Gasworks Business Park
Belfast BT7 2JA
T. 0845 302 0008

www.ni-environment.gov.uk

ZEBRA MUSSELS

STOP THE SPREAD



An Agency within the Department of the
Environment
www.doeni.gov.uk



INVESTOR IN PEOPLE



NIEA
www.ni-environment.gov.uk

Zebra mussels live in lakes and canals but are not native to Ireland. They are an extremely aggressive invader, often dominating a water body and reducing the amount of food available for other organisms, including fish. They can have widespread economic and ecological impacts.

Visitors to Lough Erne may have seen them attached to boats, piers or stones. They cause problems for water users such as boaters and anglers.

This leaflet describes how to prevent the spread of zebra mussels into other lakes.



Vital Statistics:

Life span: 2-4 years.

Size: 2-3.5 cm.

Rate of reproduction: each female can release up to 1 million larvae each year.

Life cycle: larvae are carried in water currents and settle out after about 3 weeks. Under favourable conditions, they can reproduce when less than a year old.

Habitat: they attach to any surface including other mussels, rocks, jetties, water intakes, wooden structures, plants and soft substrates.

Spread: they can spread naturally in water currents and by the movement of cruisers, angling boats and equipment.

Zebra mussels are spreading rapidly and they pose a serious threat to lakes.

Be a responsible water user - make sure you don't spread Zebra Mussels.



Impact of the Zebra Mussel

Once zebra mussels become established in a lake they are impossible to remove and the lake will change forever.

Zebra mussels will impact on economically important species and the tourist industry associated with recreational fishing.

Economic impacts

- They damage boats and engines by blocking cooling systems.
- They block public and private water abstraction stations increasing operating costs.
- They attach to hard structures and can weigh down buoys, chains and moorings so expensive maintenance is needed.
- They have affected both public and private water abstraction stations on Lough Erne.

Ecological impacts

- They result in the extinction of native swan and duck mussels.
- They filter the water so it becomes clearer resulting in increased plant growth which impedes fishing and boat navigation.
- They can cause toxic algal blooms.
- They decrease the amount of zooplankton and food available for fish.
- Fish populations changed in Lough Erne after zebra mussels altered the food web.

CLEARER WATER IS NOT CLEANER WATER

Lough Erne has experienced significant changes as a result of zebra mussels. Prevent them spreading to new lakes by taking action.



How you can help

Zebra mussels spread naturally in water currents within connected lakes and rivers. Outside connected waterways they are mainly spread by recreational activities such as boating and fishing. Zebra Mussels attach to the hull of boats and on weeds caught on boat trailers. They are transferred to new areas when infested boats are launched into new waterways. They can also be spread by equipment and structures moved from infested areas to zebra mussel free areas e.g. pumps, pipes, tanks, fishing gear, nets.

Preventing zebra mussel spread is a shared responsibility amongst all water users.



Keep boats free of zebra mussels

- Look out for zebra mussel warning signs.
- Keep boats in the water for the shortest possible time.
- Keep boats clean on the outside.
- Drain all bilge water to remove larvae.
- Remove all weed from trailers and boats before leaving a zebra mussel infested area.
- Consider using antifoulants. Ensure you use an approved brand and follow the instructions.
- Dry out boats. Zebra mussels will eventually die once removed from the water, but this may take as long as 3-4 weeks under damp conditions. Ideally boats should be stored in dry conditions where the mussels can dry out.
- If you buy a second hand boat have it cleaned.

These actions will prevent the spread of most aquatic invasive species. For further information on other invasive species see www.invasivespeciesireland.com



Management of marinas and slipways

At marinas and slipways on lakes that are zebra mussel free, a special lookout should be made for fouled boats. These must be properly cleaned before launching.

