

Marine Pathways

Managing marine non-native species



Invasive non-native species and your shellfish farm



- What they are
- Two ways to reduce your risk
- What to do if you find them
- Species to look out for

What is an invasive non-native species?

These are species which have been intentionally or unintentionally introduced outside their natural range because of human activity. They become 'invasive' once established and causing biodiversity and economic damage. It's estimated these species cost our marine industries in the region of £40 million every year in Great Britain.

How you can help control the spread

Moving shellfish in the aquaculture industry can lead to invasive species being introduced and spread. Invasive species can contaminate equipment and your stock species, foul the hull of boats and stow in bilge water.

Two steps to reduce your risk

1. Have a biosecurity plan

All farms must have a biosecurity plan for controlling disease, based on guidance produced by the Fish Health Inspectorate. These good practice measures will also help to reduce the spread of invasive species.

- guidance on how to write a biosecurity plan:
<http://goo.gl/q6c5EN>
- good practice on how to reduce the risk of spreading invasive species through mussel seed movements:
<http://goo.gl/GI7MOL>

2. Stop the introduction and spread

- use appropriate anti-fouling products to prevent settling
- reduce any unnecessary equipment on site that could facilitate fouling - rubber bag ties, hooks, trestles, ropes
- be aware of any recent reports of invasive species in your area and check equipment eg ropes, chains and imported stock
- clean – check – dry. In many instances, farming equipment is routinely removed from the sea, left to dry on land/pressure wash cleaned before being deployed again
- when biofouling does occur and has to be washed or removed, use rubbish bins or on land composting

What to do if you find a suspected invasive species

1. Identify it

You can use an identification guide: <http://goo.gl/k5Uk5U>

Risk and impacts of different species: <http://goo.gl/KEjxuL>

If you're stuck, send a photo to recording@mba.ac.uk

2. Record it

This helps governments monitor the location of these species and also provides information about wider management needs. Recording sightings also helps you and your industry identify potential risks.

Record sightings at <http://goo.gl/KL3Ef2>

3. Remove it

Organisms should be removed from equipment and structures, and disposed of appropriately on land.

Further help and advice

For help and advice on invasive species send an email to the GB Non Native Species Secretariat: nnss@ahvla.gsi.gov.uk

Case study: How to manage *Didemnum vexillum*



- an experiment was run at an oyster farm in Ireland to find a way to manage *Didemnum*
- fouled oyster bags were treated using 3 methods: a 5% vinegar spray, bag turning, and both spraying and turning
- the most cost effective and time efficient of these control methods was turning and spraying oyster bags 3 times over 6 months, and by spreading treatments out over that time
- **further work will be conducted on the impact of treatments on native species and oysters**

Species which could affect you

Veined rapa whelk <i>(Rapana venosa)</i>	Carpet sea squirt <i>(Didemnum vexillum)</i>	Leathery sea squirt <i>(Styela clava)</i>
		
<p>A mollusc predator which feeds on mussels and oysters</p>	<p>Can overgrow mussel lines, preventing mussel stock from establishing and growing effectively</p>	<p>Can overgrow mussel lines, preventing mussel stock from establishing and growing effectively</p>

Slipper limpet <i>(Crepidula fornicata)</i>	Japanese wire weed <i>(Sargassum muticum)</i>	Japanese skeleton shrimp <i>(Caprella mutica)</i>
		
<p>Mixes with mussel and / or oyster beds grown on the seabed, increasing harvesting costs as they need to be individually separated and removed.</p>	<p>Can overgrow oyster trestles and clog up cages, reducing the flow of water and food around stock species.</p>	<p>Can infest man-made structures if get to high density e.g. mussel socks and may compete with mussels for food</p>