

British Irish Council Invasive Non-Native Species Action Plan

Didemnum vexillum, Carpet Sea Squirt

Introduction

Carpet Sea Squirt *Didemnum vexillum* is a colonial tunicate species native to Japan (Kott, 2002). It is generally a temperate cold-water organism, which has been spread globally to countries including New Zealand, United States, Canada and parts of Europe. The risk assessment commissioned by the GB Non Native Species Secretariat considers the species to be high-risk and invasive with the capacity to reproduce rapidly. It can outcompete native species, deteriorate environmental integrity, and cause significant economic harm. It can establish colonies by larval dispersal or fragmentation and fouling of man-made structures such as vessel hulls, aquaculture equipment and marine infrastructure can occur and pathways of risk include vessel movements and aquaculture.

Within the British Irish Council (BIC) region, it is known to be present in England, Wales, Scotland, Northern Ireland and Ireland, although not yet reported from the three Crown Dependencies; Isle of Man, Jersey and Guernsey. The environmental and economic impacts that *D. vexillum* can have warrants a collaborative, and co-ordinated approach to species action planning which under this agreed framework will be developed for *D. vexillum* management across the region. While the Plan focuses on *D. vexillum*, the approach, especially in relation to improving biosecurity, could have direct relevance to the management of other marine invasive non-native species.

Aim

To ensure a co-ordinated approach across the BIC region to reduce negative impacts of *D. vexillum* by slowing its spread and, where feasible, preventing its introduction to new sites.

Objectives

1. Improve early detection, monitoring and surveillance

a) work collectively to ensure that identification skills can be readily accessed by administrations across the BIC region.

a) Improve surveillance of *D. vexillum* by applying the most relevant risk based surveillance techniques informed by pathway hot spot analysis where possible.

- c) Use the latest scientific approaches to improve identification and surveillance of *D. vexillum* in the waters of the BIC region.
- d) Use relevant staff engaged in coastal work, to report suspected incidences for investigation during the course of routine working duties and marine observations, and provide training as necessary.
- e) Promote the role of citizen science in vigilance and reporting by engaging with relevant organisations and amateur groups to raise awareness.

2. Coordinate data management and storage

- a) All BIC administrations to record the current distribution of known *D. vexillum* locations and update as new incidences are confirmed
- b) Establish a monitoring regime to evaluate trends and vectors of spread
- c) Identify a suitable database for the storage and sharing of data for the BIC region, taking account of appropriate scales for presentation of information.

3. Manage pathways to minimise risk of accelerated spread

Incidence reporting within the BIC region

- a) Establish an alert procedure whereby relevant officials in the BIC region can share information on new reports in real time to allow for pathway management and where required, control.

Improving biosecurity

- b) Collate a toolbox of evidence based biosecurity measures, (including control and management measures) for use by administrations, relevant industries and regulators to minimise the spread of *D. vexillum*.
- c) Work with recreational boat users to limit spread of *D. vexillum* via hull fouling and fouling on boating equipment by
 - o Identifying and implementing actions within relevant pathway action plans that will help reduce spread
 - o Engaging with marina operators, to promote vigilance and good biosecurity practices on site and amongst users

- d) Establish cross jurisdictional, and internal, biosecurity protocols for application by the aquaculture industry with input from aquaculture policy officials, industry and relevant scientific expertise
- e) Establish Biosecurity Action Plans for locations most at risk from either spreading or receiving *D. vexillum* at an appropriate scale and where feasible or appropriate to do so.

4. Improve awareness and vigilance, and encourage reporting

- a) Raise awareness of *D. vexillum* across relevant sites and sectors including ports, marinas, recreational boating and the aquaculture industry with consistent messaging across administrations to facilitate understanding and to encourage strategic monitoring and early reporting to relevant bodies . The use of a Communications Plan may facilitate this, where appropriate sharing resources across administrations.