

Solent Biosecurity Planning: Southampton Water Workshop 1 Report

Findings from the marine invasives and biosecurity workshop held on 22 March 2023 focussing on Southampton Water. Please see Appendix 2 for the agenda.

See Appendix 1 for the delegate list.

Key Findings:

- We need a simple way to identify, record and access resources on marine invasives. Online resources are preferred and simple online training videos for staff requested. We need an APP and QR codes for use in the field that can be accessed by a mobile phone.
- A key pathway is movement whether that be vessels, equipment or people. As the Solent is relatively high in marine invasives, we should be educating people to carry out biosecurity measures when leaving and entering the Solent.
- All port and harbour authorities need to sign up to the biosecurity plan.
- There needs to be links with freshwater colleagues to see how invasives can spread in the whole water environment.
- There is uncertainty about if and how dredging can spread marine invasives.
- Good practice is occurring, but it is not recorded as a 'biosecurity measure'. We need to record this and demonstrate case studies.
- We need to push the economic incentives to undertaking measures e.g., use less fuels on vessels.
- It would be helpful to have biosecurity accreditation for contractors.
- Biosecurity measures need to go in existing material like harbour guides, newsletters or educational leaflets to reach water users.
- How do we monitor and enforce compliance with biosecurity measures. What legislation can be used to keep out heavily fouled vessels.

Are there any species of concern for your area/sector?

Delegates noted the following species:

- Pacific oysters - Coastal Partners, have been undertaking work in Hook and have been surveying for oysters in relation to coastal defences and structures, they want to understand how to minimise risk of spread/establishment. University of Southampton note that there were signs of pacific oysters in the Solent in the 1970s and they instigated research so have extensive data. They found a lot of hand gathering of pacific oysters at the same time, which almost helped to keep them in check, but raw oysters from the Solent area are not very profitable due to water quality (meaning less incentive to harvest them).
- Smothering species (e.g. *D.vexillum*)
- Manila Clam.
- Slipper limpet.

What pathways are relevant to your area/sector/where you operate? What activities in your area/sector do you think are high-risk for spreading marine invasive species?

- Construction and maintenance.
- Beach recharge, deposition of dredged material.
- Recreational use can be high intensity – canoes, kayaks, boats, etc., (recreational users don't always follow measures).
- Large vessel movements, e.g. shipping – how do you know where they have come from? Do we need to give people an 'alert' when we know ships are coming from high-risk areas.
- Freshwater pathways - is this an issue/does it need to be considered? There is some interaction and movement across marine and freshwater, vectors for freshwater NNS can be through marine pathways, especially if the pathway comes into brackish water.
- Water Quality - improved water quality could facilitate more colonisation of NNS, especially for opportunistic and competitive species. Conversely the invasive species are "tougher" so can survive in worse water qualities. Overall improved water quality means a better environment for natives and non-natives so could lead to improved biodiversity of native species or easier colonisation of NNS – will potentially be determined at a local scale.
- Dredging - can INNS spread through disposal sites and how could beneficial use or beach recharge spread INNS? Current dredging licencing and monitoring doesn't capture INNS that could be moved in the sediment.
- Oysters moving from Scotland hatcheries into the Solent for oyster restoration.
- Small boat movement by Environment Agency for survey work. Nets and grabs plus equipment and PPE for surveys, wet suits for diving.
- Ships, recreational boating, paddleboards, kayaking, jet skiing in Southampton Water.
- Power station water heating.

What activities in your area/sector do you think are high-risk for spreading marine invasive species?

- Hand gathering/fishing – people on the shore can inadvertently move things around when gathering and hand collecting, also can spread when moving to different areas.
- Accumulation of smaller vectors – lots of small wash downs or activities happening in small harbours, but this adds up to a big impact so changing the mindset of 'oh it's only a small thing so won't have an impact.'
- Building coastal defences – heavy machinery and material moving between sites, equipment (amphibious), material imported internationally, reusing materials.
- Reusing piles and moving pontoons, moving mooring sinkers (within the river), material reused, dredging machinery from a dredging company (moved from elsewhere).
- Vessel movements – if you know they've come from a high-risk area.
- Recreational activities – very high intensity.

What is currently being done to manage marine invasive species where you operate?

- New washdown area (fully tanked system) in Beaulieu, and an awareness campaign.
- Clean check dry in construction plans, vessel operators' protocols.
- Biosecurity procedures (Environment Agency) to stop movements of vessels used for surveys going to other areas, washing down all kit on the boats, using disinfectants.
- Current monitoring as required for environmental assessments for construction (Coastal Partners).
- Not much – no current or up to date biosecurity plans for most of the area.
- Blue Foundation oyster restoration work in the Solent has Biosecurity measures in place.

What practical actions do you think could be done to reduce the spread of marine invasive species where you operate?

- Apply or amend the legal framework to allow for the exclusion of vessels with heavy fouling.
- Creation of a biosecurity plan to put out actions and information – not too complicated so can be understood.
- In-person training sessions for people on the frontline to monitor (appropriate and regular information).
- Frequent reviews (annual)?
- Copies of resources available to all people.
- Easy-to-digest resources for all levels of understanding (public consumption) e.g., RAG scale for riskiness.
- Difficult to account for joint ownership of a plan when not equal or transparent stakeholders.
- When employing external contractors, you have to trust that they follow protocols, though biosecurity agreements can/should be included in contracts that workers must adhere to.
- Templates for biosecurity plans would be helpful as a first step.
- If creating plans for a specific site, it would be helpful to be able to send the plan to an external reviewer to assess it and know whether it is sufficient/accurate.
- Develop a community and network of trained people in the area to refer to about biosecurity and invasive species.
- Perhaps provide funding for student projects, also highlight the need to engage the university user groups, e.g., marine science students and engineering students to introduce biosecurity ideas.
- The members of the group reported that they have the staff to implement biosecurity measures but not the expertise.
- Need information on where to report invasive species sightings and somewhere to gather data.
- Framework for biosecurity actions/measures, need training and tool set to implement.
- Introduce an accreditation scheme – those contractors who are known to follow biosecurity get a 'plus.'

- Horizon Scan - survey and start to raise awareness of species that will potentially move into the area and cause issues. Needs to be realistic for your locality, cannot use the national horizon species list.
- Citizen Science - for this to work, need to have clear public buy-in to the issue, so need to look at how to relate the issue to the wider public and the potential side effects. Need to make it clear where and how to record any sightings, particularly horizon species.
- Resources - have a guide of key 3-5 species of concern that people can spot on a small, one-page guide. Interpretation panels – local beaches, harbour authorities, protected sites etc. QR codes – really great and can be put on anything. Apps that are accessible and easy to use. iRecord too complicated for the public to use.
- Compiling Data and Join Up - everybody is doing their own thing there needs to be more join up and sharing of knowledge and data.
- Use Economic Drivers and Incentives: E.g. ecosub, in water hull cleaning, driver to do that is to save on fuel, using potential of what it will cost in the future to drive action now.
- Environmental Officer Positions - having someone in an environmental position in the ports/harbours is key for driving biosecurity plans forward.
- Setting new standards - E.g. in Falmouth where they changed the wash off process to Hoover up and avoid re-entering into the environment, one marina started and then it became the new standard. Sharing case studies like this is really important too, not well known that this was happening.
- Licencing and Conditions - have a biosecurity plan condition on licences and a reporting requirement to be able to monitor.
- Raise awareness with Harbour Masters about Ballast water responsibilities and regulations enforcement and monitoring.
- Raise awareness with fishermen about reducing INNS and the reduced cost to prevent introduction vs treatment or removal.
- Fishing nets cleaning at sea vs to at port to reduce introduction and spread of INNS.
- Environment Agency to encourage use of the guideline for removing and reporting on INNS to CEFAS, MMO, Natural England.
- Suppliers and merchants of vessels and equipment to provide INNS factsheet with all purchases.
- Roadshow for boat shows to share information to vessels owners and operators.

If you think there is potential to implement biosecurity measures where you operate, in what format would you like biosecurity material in order to facilitate implementation?

- Targeting local user groups to raise awareness, e.g., through social media recreational activity groups.
- Put in biosecurity information in recreational group materials e.g., newsletters and periodicals.
- In-person field sessions to ID invasive species.
- Targeted materials for different audiences.
- Digital/web based.
- Presentations / workshops – able to access or download afterwards.

- Information that can be disseminated in newsletters and booklets – distilled for a target audience.
- Readily updated information and a notification system (annual updates?).
- Web Hub - using clear links, QR codes, simple reporting mechanisms, Apps for use in the field.
- Pathway Guides - provide similar to the species guides but shifting to have it directed through pathways rather than species.
- Collating Resources - there are so many different resources out there – first step is bringing them all together.
- Working practice guide and task sheet guidance and crib sheets laminated as well as online resources in the field or at port side. Simple wording of laminated sheets guidance.
- Solent Forum to provide support such as resources online to help prepare BS plans.

What do you believe the next steps are in agreeing a biosecurity plan for this area?

- Potentially have the opportunity to comment on draft plans and frameworks.
- You will get more feedback if people are given a chance to see draft before the next workshop, as well as post-workshop and pre-publication.
- There needs to be better legislation and regulations in place that can apply pressure on local port and harbour authorities to instate biosecurity plans as works a lot smoother when they are the key drivers.
- Need monitoring and enforcing to be able to make this work.
- The EA need to train staff to be more aware, and support CEFAS enforcement of INNS.
- Anyone doing work in the marine are needs to have access to training on INNS prevention.
- Shoresearch data needs to be built into the national recorder for INNS.

Summarise Key Points

- Pacific oysters and smothering species are a concern.
- Recreational activities and coastal construction are major pathways.
- Reuse and movement of materials and equipment like pontoons an important pathway.
- Current washdown areas, CCD material, biosecurity procedures being followed, construction protocols.
- Need resources that can be distilled and targeted to user groups.
- In-person training sessions for ID.
- Accreditation scheme for contractors or agreements in contracts.
- Need to create a tool set with information to disseminate to targeted user groups.
- Page of biosecurity guidance in e.g., a harbour guide to disseminate information.
- Opportunities would be welcome to review the draft plans and framework to give feedback before publication.

Appendix 1:

Delegates

Ken Collins - University of Southampton
Mark Davison - Environment Agency
Jenny Mallinson - University of Southampton
Ilectra Touliatou - Environment Agency
Fiona Woods - University of Southampton PhD
Fabian Bowes-Richley - Environment Agency
Hilary Crane - Coastal Partners
Mary Montagu Scott - Beaulieu

Staff:

Katie O'Shaughnessy – APEM Ltd
Lucy Lintott – APEM Ltd
Chris Wood – Marine Biological Association
Karen McHugh – Solent Forum
Kate Ansell – Solent Forum
Jess Taylor – Natural England
Caitlin Napleton – Natural England
Rohan Smith – Natural England

Appendix 2. Agenda

- Welcome and aims of workshop – Karen McHugh (Solent Forum)
- Why we are doing this work – Jess Taylor (Natural England)
- Introduction to marine invasive species – Katie O'Shaughnessy (APEM, Ltd)
- Invasive species display – Chris Wood (Marine Biological Association)
- Introduction to biosecurity – Katie O'Shaughnessy (APEM, Ltd)
- Discussion breakout sessions – all
- Summary of major discussion points – Katie O'Shaughnessy (APEM, Ltd)
- Closing statements – Karen McHugh (Solent Forum)