

Questions:

- 1- What do you consider to be the main impacts (consequences) from marine pests to your business, industry, activities or the environment?
- 2- What activities should the Australian Government do to manage the biosecurity risks associated with marine pests to an acceptable level (to protect your business, industry, activities or the environment)?
- 3- What information or data should the Australian Government collect to support ongoing national commitment to managing marine pest biosecurity

1. The main impacts are currently to the environment, fisheries, aquaculture and public amenity from the Pacific oyster in NSW and Tasmania. These impacts have not been effectively quantified Nationally for a single species or suite of species so it is difficult to illustrate the main impacts. Impacts on the general environment are relatively unquantifiable in terms of revenue.

Marine pests have been relatively insignificant in terms of impacts due to the degraded locations the marine pests have colonised (Ports, marinas and man-made waterways). Australia hasn't seen an extremely deleterious benthic blanketing bivalve species as have been experienced elsewhere in the world. Infrastructure damage would be the largest impact then where our port areas are often resident to power stations, heavy industry and alike. Maintenance costs increases in those regions could be dramatic.

2. Promote national citizen science programs, deliver the domestic ballast water management arrangements as soon as possible and coordinate domestic biofouling responsibilities from the states and Northern Territory.
3. National data should be focussed on the data showing the presence and absence of marine pests and vessel logistics for decision making by states and the Northern Territory.

Questions:

- 4- What are the best ways to manage and monitor the biosecurity risks of biofouling on vessels?
- 5- If the Commonwealth progresses to regulate the management of biofouling on international vessels, what role should it take in the development of domestic controls by the states and territories?

4. Increase monitoring of domestic recreational vessels
5. A coordination role only. To develop the national standard which the jurisdictions can apply.

Questions:

- 6- Should the department consider a regulatory framework for international biofouling management that is:
 - a species-based approach (as currently proposed in the Biofouling RIS) or
 - an approach based on a requirement for vessel operators to adopt IMO Biofouling Guidelines, including on-board biofouling management plan and record book.

6. IMO Biofouling guidelines, including on-board management plan and record book as it would be freely accessible by any international vessels without having to search for Australian specific requirements. Also as the IMO updates their requirements it would not make the Australian requirements out of date.

Questions:

- 7- How can the Australian Government cost-effectively manage domestic ballast water risks, while preventing the spread of established marine pests?
- 8- Should species-specific assessments of port-to-port movements, with associated monitoring, be used?
- 9- Should we restrict ballast water movements between suitably determined regions?

7. By promoting citizen science reporting. By promoting innovative identification techniques.

8. Species specific assessments of port to port movements and associated monitoring isn't perfect but it does reduced risk and it does provide a system.

9. Using regions rather than monitoring is an option but it is also not perfect. It has little or no effect on the gradual local spread of an established species to a new area. We have seen this in the movement of *Asterias amurensis* into Wilson's Promontory, Victoria and although it is clear that it was biofouling, we have also seen this in effect in the movement of *Undaria pinnatifida* to Apollo Bay Vic. Close movements are the most likely places for new introductions. On reflection of this species specific assessments are more appropriate but regions are easier and more cost effective.

Questions:

10- What are the most important aim(s) for monitoring in a cost-effective national marine pest biosecurity system?

11- How should this monitoring be achieved?

10. The aim of monitoring should be both as an information gathering exercise to establish any trends in colonisation, for reporting functions of government to inform new marine development proposals and an emergency response alert network.

11. Monitoring should be achieved nationally once every 10 - 15 years for all species in the National Monitoring Manual and Guidelines and for all 18 NMN locations but regularly for a suite of species Nationally using inexpensive plankton tows and DNA identification techniques.