

## **Recommendation on Invasive Alien Species**

*Presented by IUCN*

*Adopted during the ICRI General Meeting (GM)  
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*Acknowledging* that Invasive Alien species (IAS) are recognized as one of the main global threats to biodiversity, and the rate of marine species introductions has increased exponentially since the start of the 20th century.

*Recognizing* that impacts of introductions can be at least as severe in the marine environment as in the terrestrial, and even more difficult to control or eradicate,

*Noting* that while several global fora have called for prevention of IAS introductions, as well as control and eradication of species that threaten ecosystems, habitat or species, many actions to address IAS remain largely insufficient, in particular with respect to the marine environment and their impact on coral reef ecosystems,

*Also noting* the International Convention for the Control and Management of Ships' Ballast Water and Sediments, adopted in 2004, is yet to enter into force, and there are no international regulatory mechanisms for addressing hull fouling,

*And recognizing* that with some notable exceptions, national and local actions to address IAS are constrained by lack of knowledge as well as appropriate tools:

### **The General Meeting of the International Coral Reef Initiative**

*Encourages* ICRI members and networks, other governments, donor agencies, non-governmental organizations, the scientific community, and other relevant organizations to:

*Take note* of and, as possible, address the recommendations from the Third International Tropical Marine Ecosystems Management Symposium, Theme 5, Session 2: Non-indigenous and Invasive Species (Annex 1);

*Strengthen* management of coral reefs and associated ecosystems to build resistance to marine bioinvasions, including through continued development of effectively managed marine protected areas and implementation of local/site level approaches for preventing introduction and spread; and

*Raise* awareness about and build capacity to address IAS among reef managers and other key stakeholders, such as in tourism, diving, yachting, fishing, and aquaculture, as well as among national and local policy makers.

*Encourages* countries to take relevant actions to develop national and regional regulatory mechanisms to manage hull fouling, in partnership with international agencies such as IMO, and based on available guidelines<sup>1</sup>.

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<sup>1</sup> e.g. GISP 2008. Marine Biofouling and Invasive Species: Guidelines for Prevention and Management. GISP and UNEP Regional Seas Programme 68pp

### Third International Tropical Marine Ecosystems Management Symposium (ITMEMS 3)

#### Theme 5: Human Impacts on Coral Reefs and Related Ecosystems

#### **Session 2: Non-indigenous and Invasive Species**

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##### **Recommendations**

1. Awareness about marine invasive species and the threats they pose is generally low, including among managers, decision makers as well as the general public. This needs to be urgently addressed through appropriate campaigns targeting all relevant stakeholder groups. It can also be tackled through networking with relevant civil society organizations, including e.g. the dive and recreational boat industry.
2. Even in cases where awareness of marine invasive species is considerable – and there is e.g. knowledge about efforts to tackle the issue on an inter-governmental level – there is not enough knowledge about the options available to ecosystem managers to address marine alien invasive species on a local/site level. There is a need for manuals and guidelines as well as capacity building and general information on local/site level approaches to preventing spread, mitigating invasions, and informing stakeholders and decision makers regarding the impacts.
3. Scientists and managers that do deal with marine alien invasive species are frequently operating in isolation (usually in a biosecurity context) and need to reach out to marine managers at local level, to address the capacity and awareness gaps mentioned above.
4. There is also a need for an international mechanism that provides access to the information and tools mentioned above, as well as to case specific advice and expertise on invasive species identification, rapid response and other relevant issues on a short notice – essentially an international invasive species “fire brigade” that managers can call on for assistance.
5. Managers need to be aware of national and local level policies, regulations and laws in relation to invasive species, as well as of relevant institutions that have a mandate to tackle the issue. Efforts should be made to create linkages, both vertically and horizontally, between relevant organizations. It is recommended that countries establish national biosecurity agencies where not already present.
6. Additional baseline monitoring and improved capacity for early detection is needed. This can be furthered e.g. through partnerships with organizations and networks already engaged in monitoring activities, such as Reef Check, Global Vision International, and GCRMN, which could include surveys of specific priority target species in their protocols.
7. More research is needed on the social and economic implications of invasions – essentially making the case for tackling alien invasive species in terms that can sway policy and decision makers. Appropriate methodologies need to be developed for this.
8. While the fact that more is known about marine alien invasive species in temperate environments and there are numerous examples of devastating invasions reflects a larger

focus on this bioregion, it is still unclear whether it reflects a lesser extent of the problem in tropical marine environments. Appropriate studies need to be carried out to verify this as it has significant management implications.

9. The initial evaluation of how marine alien invasive species are managed in MPAs around the world has provided indicative results, but needs to be scaled up and carried out with a more representative sample to improve understanding on the extent of the capacity and knowledge gaps and the challenges faced by MPA managers.
10. While the emphasis of managing alien invasive species in the marine environment must be on prevention, there is a need for continued development of early detection mechanisms as well as research into eradication methods.
11. Policy and decision makers should be made aware of the threats and potential economic as well as social implications of marine bioinvasions. This should scare the relevant institutions into action but must not give the impression that the problem is insurmountable. On the contrary it should be clear that a lot can be done, but much more so before an introduction.
12. The global focus on management of marine alien invasive species is largely on macro-organisms, but especially in tropical systems should not overlook the importance of micro-organisms as they are frequently agents for diseases (including e.g. coral diseases).
13. Restoration efforts in response to environmental degradation should be carried out in a way that does not introduce non-indigenous species.
14. There is a need for more research on how climate change may affect or compound the threat of marine invasive species, as it can reduce differences between donor and recipient environments and increase the chance of survival and establishment of alien species. In addition, climate change has contributed to increased degradation of marine environments, such as tropical coral reefs, making them more susceptible to bioinvasions.
15. More funding is currently spent on finding “space aliens” than on finding or stopping “marine aliens”, in spite of the obvious threats posed by the latter (and doubts over the very existence of the former). Donors need to be convinced alien invasive species in the marine environment is one of the main threats to biodiversity worldwide and deserves and needs appropriate attention.