

CIESM Congress Session : Alien records
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Moderator's Synthesis

Seven papers were presented in this session, co-authored by researchers from 10 countries. The thematic of the presentations ranged from the records of alien species (an ascidian in Malta, the lion fish in Cyprus, coastal plant in Romania, red alga in Tunisia) and regional overviews of non-indigenous biota (status of invasive marine species in Libya, exotic fishes in Mediterranean) to public participation in invasive species detection through social networks. The following discussion was centered on three main questions: 1) What are the best methods for early detection and correct identification of alien species; 2) How to increase the level of certainty about the pathway/vector of introduction; and 3) What are the objective methods to measure losses and gains caused by introduction of alien species?

The participants expressed their opinion that in spite of rapid advent of molecular methods, it is important to support and develop the traditional taxonomic knowledge for proper identification of new non-indigenous species (NIS). Appropriately supervised 'citizen science' can provide through social networks important data on exotic species status (established, not established, rare, common, etc.), their secondary spread and impacts. Provided that data are scientifically validated and standardized, such method is especially useful for relatively large conspicuous species, such as fish. Community involvement is also an important instrument to raise public awareness on the problem of marine invasive species.

There are clear gaps in the knowledge on pathways and vectors of NIS introductions, which may impact the science advice to management. Especially it is vital to distinguish between the "Lessepsian migration" involving physical movement of species through the Suez Canal and introduction of aliens by ships (ballast water, hull fouling, etc), which are passing the Canal. Management options for these two pathways are different, involving different legal instruments and technological solutions.

Another important knowledge gap is the lack of data on losses and gains caused by introduction of alien species. It is not enough to record new and new NIS entering the Mediterranean Sea, it also is important to investigate that is their impact on biodiversity, environment, economy and human health. The solid evidence base on the bioinvasion impacts is needed for prioritization of environmental remediation measures, especially than funds for such remediation are limited.

It was agreed also that data on new species records, pathways and vectors of their spread, their biological traits and environmental tolerance limits as well as impacts, should be publically available through the scientifically verified and constantly updated open source databases. Ideally, such database(s) should cover not only the Mediterranean Sea, but also other regions of the world to make it possible interregional comparisons and exchange of data needed for management decisions.

