

AquaNIS: a new generation information system on aquatic non-indigenous and cryptogenic species

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Scientific and managerial attention to the problem of biological invasions results in growing number of electronic resources on non-indigenous species (NIS). Currently there are more than 250 websites on NIS worldwide. The databases have been used increasingly for various analyses, though key information needs for bioinvasion management and research are only partially met. An advanced information system dealing with aquatic NIS and cryptogenic species (CS) introduced to marine, brackish and coastal freshwater environments of Europe and adjacent regions has been developed recently: AquaNIS, available at www.corpi.ku.lt/databases/aquanis. AquaNIS inherited and incorporated multiple NIS data collections from earlier projects and initiatives to which the co-authors contributed, such as: Baltic Sea Alien Species Database, FP6 and FP7 projects DAISIE, IMPASSE, MEECE and VECTORS. AquaNIS differs substantially from existing NIS information sources in its organizational principles, structure, functionality, and output potential for end-users. The system is designed to assemble, store and disseminate comprehensive data on NIS, and assist the evaluation of the progress made towards achieving management goals, e.g.: the EU Marine Strategy Framework Directive, IMO Ballast Water Management Convention and similar legislation addressing the problem of biological invasions, where the availability of advanced, scientifically validated and up-to-date information support on NIS is essential.

Geographical information in AquaNIS is arranged in a hierarchical order ranging from oceans, ocean sub-regions, Large Marine Ecosystems (LMEs), sub-regions of LMEs to smaller entities, from which a user can make a selection. For example, to ballast water management related risk assessment, the occurrence of NIS can be documented to the level of ports and port vicinities. Presently AquaNIS comprises data on 1197 NIS & CS introduction events into the six LMEs of the Atlantic margin of Europe (from Norwegian Sea to Iberian Coast) as well as, Mediterranean, Black and Baltic Sea. The latter component is freely available online, while the rest will be gradually opened in 2014–2015 after validation of data. AquaNIS invites regional NE Atlantic experts and taxonomy specialists to cooperate developing this information system as a common tool, practical for management and useful for research.

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References

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