Joint HELCOM/OSPAR Task Group on Ballast Water Management Convention Exemptions
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Background

The attached is a short update on the activities in connection with the development of the Same Risk Area concept.

Action required

The Meeting is invited to take note of the information.

Projects on Same Risk Area in Denmark. Status of November 2017

A. Same Risk Area decision support software tool

In 2016 DTU Aqua developed a prototype decision support tool as a freeware. The prototype can utilize existing data on hydrography to calculated dispersal of marine organisms and perform sophisticated statistical analysis, which can be operated by scientific staff that are not experts in the applied modelling and statistical techniques.

Scope.

The aim of the project is further develop the prototype, and complete and publish a modeling tool, that may be used for decision support in delineating a Same Risk Area.

Project activities

The activities in this follow up project is to carry out a further development and test of methods for delineating areas with high connectivity, and for identifying dispersal barriers (~Same-Risk-Areas Assessment Model, or SRAAM). An improved user interface is developed and end-user tests will be performed.

Project organisation and funding

The primary actor in the project is DTU Aqua and their funding is from the Danish Maritime Fond.

Status

The software is available and user interface is currently underway.

B. Same Risk Area case study for Øresund and Kattegat SRA (Denmark and Sweden)

Scope

The scope of the project is to conduct at case study to test and develop a new concept for an area based risk assessment method, named Same-Risk-Area or SRA. An SRA has been proposed as a management tool for national authorities granting exemptions to the Ballast Water Management Convention requirements regarding treatment of ships ballast water.

Project activities

The project carried out four main activities with the main effort on activities 2 and 3.

1. Catalogue of marine invasive species
2. Identification and delineation of areas with high connectivity
3. Delineation of Same-Risk-Area(s)

Activity 1 comprises a review of both the available literature and existing databases related to marine invasive species registered in the region, as well as marine invasive species identified as being potential invasive. Based on a review of existing knowledge of existing and potential invasive species, their biological characteristics was mapped (e.g. duration of the free swimming stages of the organisms, their habitat requirements, their tolerance to environmental conditions including water temperature and salinity, etc.) The result of activity 1 will be a selection of organism(s) and/or biological characteristics to include in the dispersal simulations (activity 2).

In activity 2 the prototype of the SRAAM (~the initial tool by DTU Aqua in 2016 as further developed in 2017) has been setup and after target organisms are agreed they will be applied to map the connectivity in the study area, including the delineation of sub-areas with relatively high connectivity and identification of possible dispersal barriers. Supplementary data from other model studies, studies in population genetics, and/or population structures of existing species, will be included to the extent these data will be made available.

Activity 3 focuses on the actual risk assessment, i.e. where the risk of natural dispersal will be compared with the risk of dispersal via untreated ballast water. The focal point of the activity will be the development and application of quantitative principles in the risk assessment. Methodologies on how to define criteria for how to delineate SRA(s) will be described.

Project organisation and funding

The primary actor in the project is DTU Aqua and their funding is from the "Dampskibsselskabet Orients Fond" supplied with in-kind contribution. The funding is allocated with 2/3 used in 2017, and 1/3 used in 2018 prior to project end in May 2018.

Status

Activity 1 and part of Activity 2 is completed.

C. Same Risk Area coordination

The Danish EPA awarded a contract to the consultancy Litehauz to prepare submissions to and participate in MEPC/PPR and in meetings with SRA stakeholders during the execution of the studies, in particular presenting a case study on SRA in Kattegat-Øresund. The activities also include to continue to engage in the management and steering of work carried out by DTU Aqua on software development for SRA, and to liaise with other SRA studies internationally.

Status

A 1-day workshop with participants from Sweden and Denmark was held in August 2017 at DTU Aqua on the case study on SRA in Kattegat-Øresund. Execution of the case study was discussed and a plan for coordination and collaboration between Danish and Swedish stakeholders was agreed.

It is considered to publish a call for a wider audience for a workshop in 2018.