Target species selection criteria for risk assessment based exemptions of ballast water management requirements in the Baltic Sea

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HELCOM/OSPAR TG Ballast 9

JHP Target Species (TS) Selection Criteria

According to JHP, there are two main general questions which should be addressed before a species is considered for inclusion in the target species list:

a. Is there a potential for a species to be primarily introduced or secondarily spread via ballast water or sediments as the major vector, and

b. Is the species present only in part(s) of the region but not the entire region in self-sustaining populations?

In addition to these general aspects, "any impact" on human health, environment or economy triggers the inclusion of the species into the TS list.

However, "any impact" is not further specified in the recent TS selection criteria.

Target Species (TS) Selection Criteria (IMO)

TS meet specific criteria indicating that they may impair or damage the environment, human health, property or resources and are defined for a specific port, State or biogeographic region (IMO 2007, G7 Guidelines)

At least **all** following criteria need to be considered

- evidence of prior introduction(s): species showed its capability to become introduced outside its native range (see 2.1.)

- impact and its severeness, i.e. (see 2.2)
  - potential impact on environment, economy, human health, property or resources;
  - strength and type of ecological interactions, i.e., severeness of its impact;

- current distribution within the native biogeographic region and in other biogeographic regions (see 2.3)

- relationship with ballast water as a transport vector, i.e., when the species was already found in a ballast tank or if the life cycle of the species includes a larval phase or planktonic adult which makes a ballast water transport likely (see 2.4).

COMPLETE recommendations

2.2 Impact and its severeness

– Differentiation between acceptable and unacceptable impact within each impact category (human health, environment and economy).

– Impact on human health and measurable economic impact should always be considered as unacceptable. *!Pathogens (presence/absence not possible)!*

– Environmental impact should be assessed as acceptable/unacceptable based on the criteria developed by Olenin et al., 2007

Impact category	Impact on species	Impact on habitat	Impact on eco-system functioning	Impact on resource users
Acceptable	No displacement of native species, although NIS may be present. Status of native species according to quantitative parameters in the community remains unchanged	No habitat alteration	No measurable effect	No measurable effect
THRESHOLD				
Unacceptable	Local displacement of native species, but no extinction. Change in ranking of native species, but dominant species remain the same. Type-specific communities are present	Alteration of a habitat(s), but no reduction of spatial extent of a habitat(s)	Measurable, but weak changes with no loss or addition of new ecosystem function(s)	Measurable, but weak changes with no loss or addition of resources
	Large scale displacement of native species causes decline in abundance and reduction of their distribution range within the assessment unit; and/or type-specific communities are changed noticeably due to shifts in community dominant species	Alteration and reduction of spatial extent of a habitat(s)	Moderate modification of ecosystem performance and/or addition of a new, or reduction of existing, functional group(s) in part of the assessment unit	Moderate modification of resources and/or addition of a new, or reduction of existing, resources in part of the assessment unit
	Population extinctions within the ecosystem. Former community dominant species still present but their relative abundance is severely reduced; NIS are dominant. Loss of type-specific community within an ecological group	Alteration or loss of habitat(s), severe reduction of spatial extent of habitat(s)	Severe shifts in ecosystem functioning. Reorganisation of the food web as a result of addition or reduction of functional groups within trophic levels	Severe shifts in resources with income loss for resource users

Modified after Olenin et al., 2007

Target species selection guide

➢ **Relationship with ballast water as a transport vector;**

➢ **Impact on human health, economy and/or environment and its severeness, i.e., does the species may cause unacceptable impact.** *In case impact severeness is not known, the species will automatically appear as TS*

➢ Evidence of prior introduction(s), i.e., the species showed its capability to become introduced outside its native range;

➢ Current distribution within the native biogeographic region and in other biogeographic regions.

Application of the TS selection criteria

➢ Species already on the HELCOM TS list need to be checked against the updated TS selection criteria (once).

➢ All species found during the current JHP port surveys and if available, additional data, are checked for TS via the risk assessment tool (y/n, pathogen concentrations?). TS are all species which are on the HELCOM TS list.

➢ Species found during the port surveys which have not been documented before should be evaluated based on the updated TS selection criteria.

Transparent format, i.e., develop a species evaluation sheet with references where available. This process could be performed by the expert group established under HELCOM Maritime.
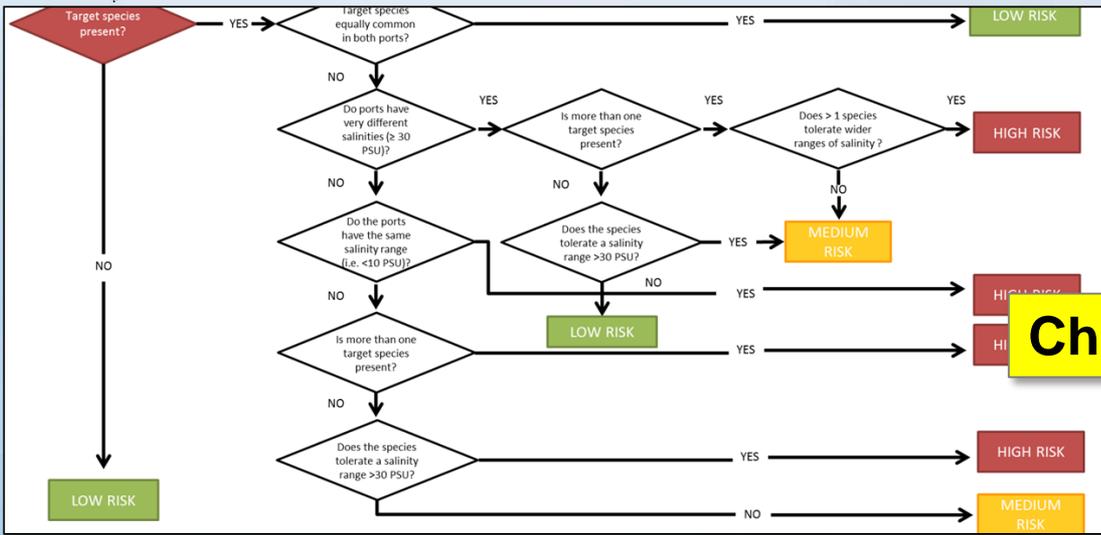
1. Port surveys of donor port and recipient port

Is there a species not documented as NIS in the Baltic?

Assess whether TS or not. Add to TS list
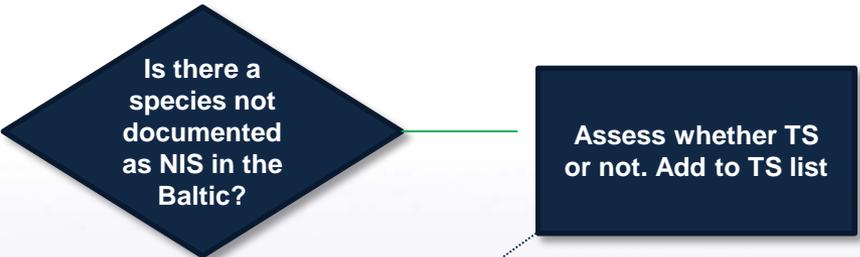
TS selection criteria

TS List

2. RA algorithm based on combined RA=species-specific and environmental matching (IMO G7)

3. RA additional aspects

Chapter 7 JHP- detailled RA

Suggestions from the COMPLETE project

- Use of the amended Target Species selection criteria presented in this report in the frame of the JHP

There will be recommendations for the update of the RA algorithm based on the current scientific knowledge (COMPLETE report intersessionally provided) in context with the activities of the HELCOM secretariat on the amendment of the RA tool