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COMPLETE

Advanced RA tool under the HELCOM/OSPAR Joint Harmonised Procedure

TG Ballast 9

13-14 December, 2018

Gothenburg, Sweden

Manuel Sala Pérez



Task to perform (O3.2)

- develop an **improved online risk assessment tool** under the **JHP**
- allow **administrations and ship owners** to identify routes for BW exemptions in the HELCOM-OSPAR
- use the **most updated knowledge** on HAOP introduction by shipping in the Baltic Sea.

<http://jointbwmexemptions.org/>



Approach to follow under COMPLETE frame

HELCOM is carrying out an improvement of the **JHP risk assessment tool** according to the **HELCOM-OSPAR TG BALLAST** input as follows:

1. Enable independent use of the tool by stakeholders ensuring **semi-automatic** port survey **upload function** and quality control of data
2. Create a **link to AquaNIS** database and thus expected output from the group of activities 5.1
3. Implement **GIS** functionalities, to enhance **visualization** of the information in the tool, including HAOP distribution (based on A3.1 results) and 'same risk areas'
4. Automatic **report generation**, to enable ease of use of the tool results in exemption applications to national authorities according to IMO BWMC Regulation A-4



Work performed so far and next steps

- Submission of implementation plan for the JHP RA tool in the frame of COMPLETE project to TG BALLAST 9-2017 in Dec 2018 ([Document 5-1](#))



To be considered at TG BALLAST 9-2018



Work performed so far and next steps (1/6)

1. *Enable independent use of the tool by stakeholders ensuring semi-automatic port survey update function and quality control of data*

➤ Modified port survey data submission [form](#) (Document 5-1 Annex 1)

❖ Submit **ONLY** information used for risk assessment analyses

Currently

Atmospheric conditions

Temperature

Sediment profile

DO

Others...



**No weight in the RA
algorithm**



Work performed so far and next steps (1/6)

1. *Enable independent use of the tool by stakeholders ensuring semi-automatic port survey update function and quality control of data*

➤ Modified port survey data submission [form](#)

❖ Submit **ONLY** information used for the risk assessment analyses

Currently

Salinity profile:

Surface

2.5 m

5 m

7.5 m

Bottom



Proposed

**Max and Min
salinity in the
port**



Work performed so far and next steps (1/6)

1. *Enable independent use of the tool by stakeholders ensuring semi-automatic port survey update function and quality control of data*

➤ Modified port survey data submission [form](#)

❖ Submit **ONLY** information used for the risk assessment analyses

Currently

Species
identification to the
lower possible
taxonomical level
(free text entry)



Proposed

- Only observations identified to species level
- WoRMS Taxonomy (Aphia ID)
- Selection from species list instead of free entry



Work performed so far and next steps (2/6)

2. Link to AquaNIS database and thus expected output from the group of activities 5.1

On-line meeting KU-HELCOM (14th November):

- a. Comparison of the JHP RA tool and the AquaNIS data model → differences and synergies in the data attributes of interest

Species information

- Taxonomy and link to WoRMS database
 - Species salinity tolerance range
 - Species observations GPS
- b. Options for future solution for automated data flow from AquaNIS output to RA tool
 - c. Timeline for the RA tool-AquaNIS link



Work performed so far and next steps (3/6)

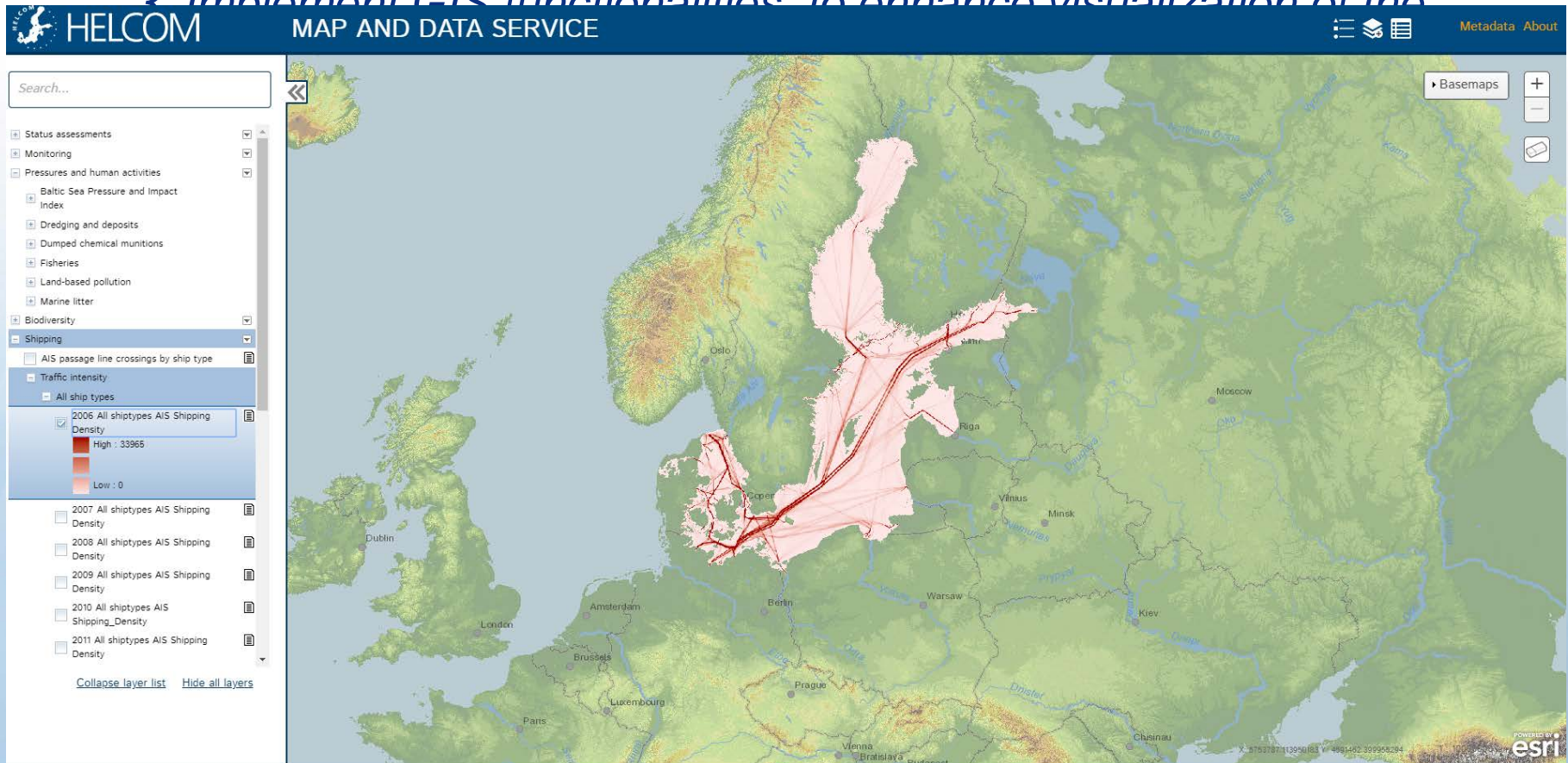
3. Implement GIS functionalities, to enhance visualization of the information in the tool, including HAOP distribution (based on A3.1 results) and ‘same risk areas’

To create GIS interface similar to [HELCOM Map and Data service](#), but with preselected set of map layers and extended base to cover both HELCOM and OSPAR regions



Work performed so far and next steps (3/6)

2. Implement GIS functionalities to enhance visualization of the





Work performed so far and next steps (4/6)

3. Implement GIS functionalities, to enhance visualization of the information in the tool, including HAOP distribution (based on A3.1 results) and “same risk areas”

Layers to be displayed:

- **Ports** as polygons including all the **sampling locations** (points)
- **Species**. Observation points (GPS)
 - Target species occurrence
 - All species present in the RA tool surveyed by ports
 - Observations from AquaNIS database
- **Environmental parameters**, such as salinity



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 **Interreg**
Baltic Sea Region



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Work performed so far and next steps (4/6)

4. Automatic report generation, to enable ease of use of the tool results in exemption applications to national authorities according to IMO BWMC Regulation A-4



COMPLIANCE

Workshop

4. Assessment results IMO



OSPAR COMMISSION

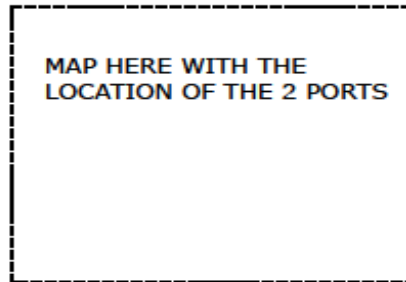
Protecting and conserving the North-East Atlantic and its resources



Automatic HELCOM/OSPAR JHP Risk Assessment report

A joint regional online decision support tool to identify low risk routes for IMO Ballast Water Convention exemptions (A-4)

Donor Port
Gothenburg (GOT)

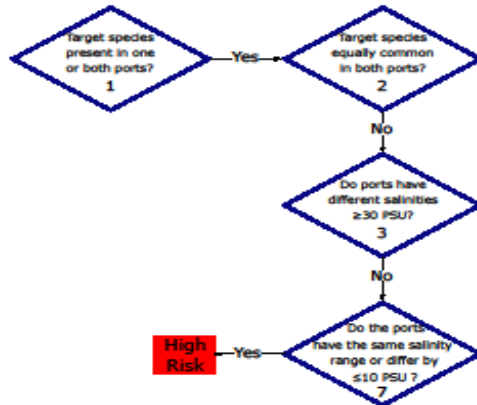


Recipient Port
Turku (TKU)

slides (4/6)

the tool according to

RA decision path diagram



RA calculation for the trip from GOT to TKU

- 1) Presence of target species for region HELCOM in both ports
 GOT *Neogobius melanostomus* TKU *Mytilopsis leucophaeata*
 TKU *Cercopagis pengoi* TKU *Palaemon elegans*
 TKU *Gammarus tigrinus* TKU *Rhithropanopeus harrisi*
- 2) Target species for region HELCOM in donor port (GOT) not present in recipient port (TKU)
Neogobius melanostomus
- 3) Salinity ranges in both ports (PSU)
 GOT: 3-35
 TKU: 3.7-11.8
- 4) Species that tolerate wide range of salinity (≥ 30 PSU)
Neogobius melanostomus 4-40 PSU

Risk Assessment Decision (Time: 30.10.2018 10:13): **High Risk**



Work performed so far and next steps (5/6)

5. *Other issues*

- Human pathogens
 - Concentration data submitted in the Port survey
 - But **NOT** included in the RA assessment analysis
 - RA algorithm only evaluates the presence/absence of TS

To include an additional level in the RA algorithm to evaluate the human pathogens concentration, accordingly to the BWMC Regulation D2, in the donor port to assess the risk of the route in consequence.



Milestones and expected outcomes

- TG Ballast 9-2018 outcome, December 2018
- Beta-version of the RA tool by TG Ballast 10, 2019
- Final version RA tool up and running by September 2020



Actions required

The Meeting is invited to consider and agree on:

- the modified form for port survey data submission as included in Annex 1 to this document;
- making use of the modified form when reporting new port survey data;
- redesigning the online user interface (moving away from Oracle APEX platform) and inclusion of GIS component as well as the display of selected map layers proposed in relation to the implementation of GIS functionalities;
- the automatic report on the outcome of the risk assessment for a particular route as included in Annex 2 to this document;
- the inclusion of an additional level in the risk assessment algorithm which would evaluate the human pathogens concentration, accordingly to the BWMC Regulation D2;



Actions required

The Meeting is invited to consider and agree on:

- the substitution in the current species salinity tolerance range data for SALINITY_MAX and SALINITY_MIN and use of these values when conducting the risk assessment;
- on-going process to create a link between the online JHP decision support tool and AquaNIS database; and
- transferring the so far collected port survey data from the online JHP decision support tool to the BaltiCheck database and storing of future port survey observations in the BaltiCheck database.



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Thank you!!



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