

Work package 2: structure of the guidelines and Seed Questions

2nd IMS correspondence expert group on “Drift modelling” meeting

Yann Le Moan – Senior Project Officer

Online, 22.03.2022

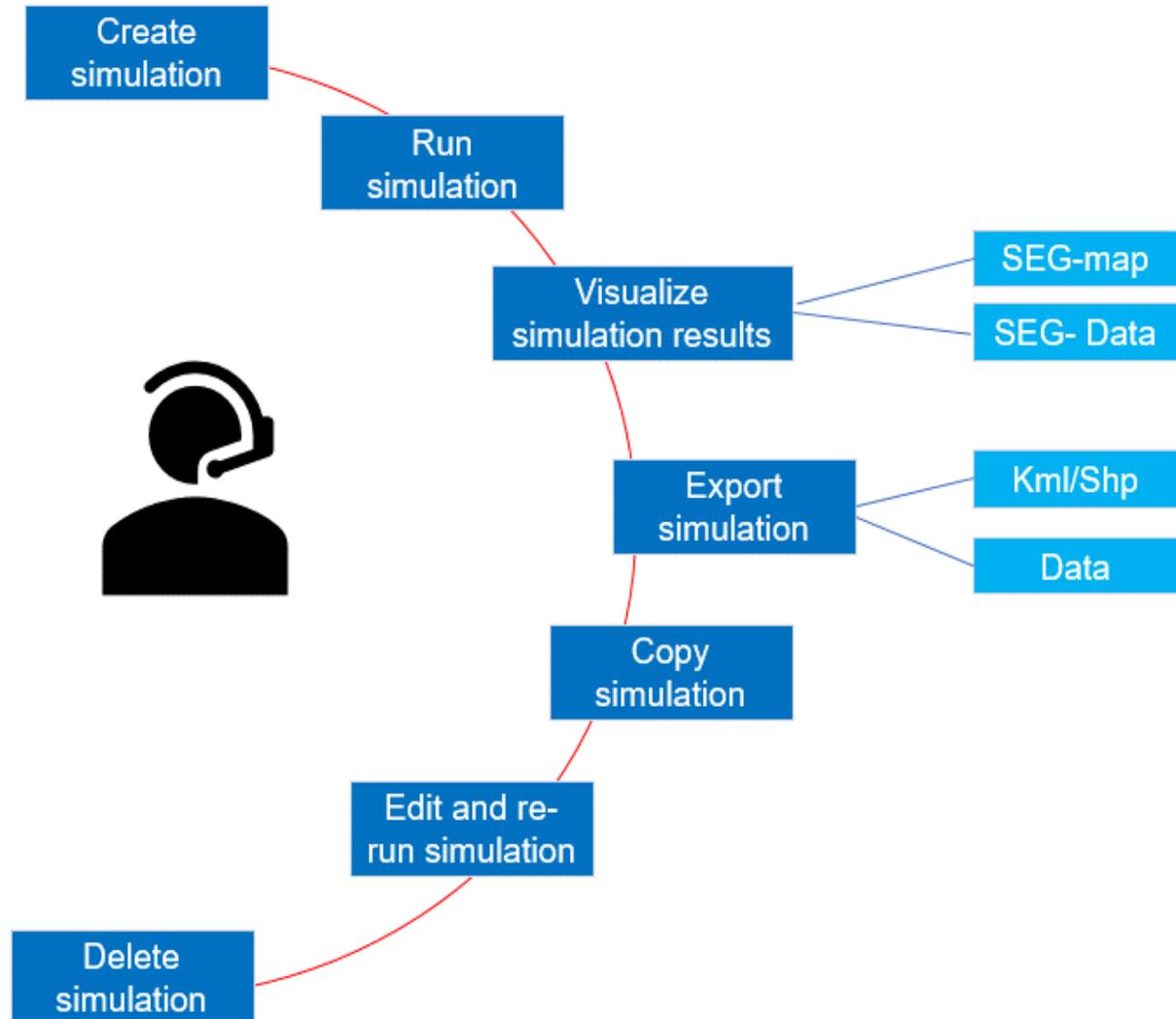
Requirements for the development of an operational IMS Drift Modelling tool.

1. Identification of user workflow
2. List of configurable drift parameters for input;
3. List of different types of objects whose drift should be simulated;
4. Options for display of drift results (e.g. probability of results);
5. Definition of user specific near-real time met-ocean data inputs;
6. Configuration, selection and display of search patterns based on the output model results;
7. Display of results in the SEG.

General questions for Work package 2 (requirements)

- Do you find relevant to use several models for a drift simulation?
- The IMS interface should propose in priority models that are used by SAR services?
- In addition to the models using the IAMSAR guidelines approach to calculate maritime drift (see chpt 4.4.3) should we interface with model(s) using other approach (e.g. apply to the leeway probabilistic approach such as Monte Carlo or other) ?
- Would you need as an option more than 1 object in the same simulation?
- Beside the SAR use cases can you provide examples for other maritime safety use cases.
 - Lost containers
 - Drifting timber/objects/debris?
 - Drifting of vessel not under command
 - ??

1. User workflow



2. List of configurable drift parameters for input

Mandatory input

General

- Simulation name
- Simulation type (backward/forward)

Drifter

- Drifter type (object)

Initial conditions (1-n)

- Latitude

- Longitude

- Radius

- Time

Duration of the simulation

- Start and end date

Model selection

- Model A

- Model B

Optional input

General

- Simulation description

Initial conditions

- Number of particles

- Probability

Metocean conditions(manually entered)

- Wind/current

3. List objects whose drift should be simulated

These objects shall address:

- SAR (e.g. Person in water, Life raft, etc..)
- maritime safety purpose (e.g. type of vessel, containers etc..)

The list from the IMS interface should be adapted to the model selected

e.g. <http://www.meteorologie.eu.org/mothy/doc/sar/cibles-sar.html>

4. Options for display of drift results

- Time element of the output
 - The result should include a timeline with predicted positions of the object in time (e.g. trajectory on hourly bases)or
 - only a display the position for one specific moment in time including reference/visualization of the probability ranking (areas/points/lines of higher probabilities as well as lower probabilities)
- Specification of the output
 - Line (e.g. trajectory)
 - Points/group of points (.g. cloud)
 - Polygon/several polygon
 - Other?

5. Definition of user specific near-real time met-ocean data inputs

- Metocean data input:
 - the model will be used with the Meocean data available with the tool(s) selected
 - Is there a need for optional fields (in the IMS interface) to be entered manually?
 - Wind
 - currents
- Are you interested in having additional Metocean data available in the future to connect to available drift models?

6. Configuration, selection display of search patterns based on the output model results

- Should the IMS interface propose search patterns displayed on Top of the drift simulation result?
 - Sector search
 - Expanding square search
 - Track line search
 - Parallel sweep search
 - Creeping line search
 - Creeping line search, co-ordinated
 - Contour search
 - Shoreline search
- Do you expect to share this pattern? With assets/other users?

- Simulation result displayed on top of the maritime picture?
 - ship positions/tracks?
 - EO images?
 - Enhanced SAR SURPIC?
 - In IMS mobile App?
- Are you interested in receiving the result via System2system?

Any suggestion to add in the requirement guidelines?



 twitter.com/emsa_lisbon
 facebook.com/emsa.lisbon

 **EMSA**
European Maritime Safety Agency