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<b>Document title</b>	HELCOM Recommendation 24/7 on further development and use of drift forecasting for oils and other harmful substances in the Baltic to be withdrawn
<b>Code</b>	5-4
<b>Category</b>	DEC
<b>Agenda Item</b>	5 - Matters arising from the subsidiary bodies
<b>Submission date</b>	12.2.2020
<b>Submitted by</b>	Executive Secretary
<b>Reference</b>	HOD 56-2019 paragraph 3.7

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## Background

RESPONSE 25-2018 reviewed a list of all valid HELCOM Recommendations and Contracting Parties and Response sub-groups were invited to inform the Meeting of any proposals regarding withdrawal or revision as well as suggestions for merging relevant HELCOM Recommendations.

RESPONSE 26-2019 revisited the matter and agreed that Recommendation 24/7 “Further development and use of drift forecasting for oils and other harmful substances in the Baltic” could be withdrawn as its provisions have been accomplished. The Meeting agreed, however, that live drift measurements into SeaTrackWeb would be very useful and invited Sweden and Estonia to look into the possibility of obtaining live data for such purposes.

HOD 56-2019 endorsed the proposal by RESPONSE 26-2019 to withdraw HELCOM Recommendation 24/7 and agreed to submit the proposal to HELCOM 41-2020 for approval.

It is also proposed that the associated Guidelines for the implementation of HELCOM Recommendation 24/7, as originally approved by RESPONSE 1-2002, are withdrawn.

## Action requested

The Meeting is invited to withdraw HELCOM Recommendation 24/7 “Further development and use of drift forecasting for oils and other harmful substances in the Baltic” as well as the associated Guidelines for the implementation of HELCOM Recommendation 24/7.

# HELSINKI COMMISSION

Baltic Marine Environment  
Protection Commission



## HELCOM RECOMMENDATION 24/7 \*)

Adopted 25 June 2003  
having regard to Article 20, Paragraph 1 b)  
of the Helsinki Convention

### FURTHER DEVELOPMENT AND USE OF DRIFT FORECASTING FOR OILS AND OTHER HARMFUL SUBSTANCES IN THE BALTIC

#### THE COMMISSION,

**RECALLING** the need for accurate and swift prediction of the drift of oil and other harmful substances in connection with accidental or illegal spills for the efficiency of response measures, law enforcement and for the protection of the marine environment;

#### BEING AWARE of

- the enhanced threats due to increasing maritime traffic and oil transport in the Baltic Sea
- new big oil terminals requiring efficient forecasting tools
- the need for optimisation due to limited response resources in relation to big accidents
- the need to increase the ability to secure environmentally sensitive areas from accidental contamination
- the need to extend the existing open water drift forecasting system to include local and coastal forecasting requirements;

#### BEING AWARE ALSO of

- improved scientific and technological means to detect oil and to forecast its drift, including the enhanced ability of weather and sea circulation forecasting systems
- new opportunities given by modern development in information technology in presentation and dissemination of results;

**MINDFUL** of the potential to use results from drift modelling systems when hind-casting the drift of an oil slick for use in cases of illegal discharges;

**TAKING INTO CONSIDERATION** that the implementation of improved systems for the support of response operations in the Baltic Sea should be accelerated by co-operation between the Parties. Each user should contribute to the development of the joint drift forecasting system;

**RECOMMENDS** the Governments of the Contracting Parties to the Helsinki Convention:

- a) to further develop existing drift forecasting systems and to co-operate closely in doing so, bearing in mind new requirements;

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\*) This Recommendation supersedes HELCOM Recommendation 12/6 "Development of a drift forecasting system to respond to spills of oil and other harmful substances".

- b) to, in particular, focus the development on
- modules for different types of oils, chemicals and also prediction of movements of oils and chemicals in ice;
  - linking the outcome of the drift modelling with GIS system, containing data of environmentally sensitive areas and other protective areas in order to better estimate the real threats and to guide the response operations and minimize the damages; and
  - higher resolution in coastal areas and archipelagos;
- c) to use drift modelling as a mean to facilitate prosecution of offenders of oil and chemical discharge regulations,

**RECOMMENDS FURTHER** that the Governments of the Contracting Parties report on the implementation of this Recommendation in accordance with Article 16, Paragraph 1 of the Helsinki Convention;

**AUTHORISES** the HELCOM Response Group to adopt technical guidelines for the implementation of this Recommendation and to supplement Volume I of the HELCOM Manual on Co-operation in Combatting Marine Pollution by a new chapter regarding oil drift forecasting.

## **GUIDELINES ON IMPLEMENTATION OF HELCOM RECOMMENDATION 24/7 “FURTHER DEVELOPMENT AND USE OF DRIFT FORECASTING FOR OILS AND OTHER HARMFUL SUBSTANCES IN THE BALTIC”**

*In order to assess whether a Contracting Party has implemented the Recommendation fully, partly or not at all, many different operational and technical requirements should be taken into consideration. To fully fulfill the Recommendation, the forecasting system should have the following elements and the following features:*

### **General**

- The system must be based on computerized, scientifically transparent, documented and tested models;
- The user interface of the system must be user friendly if the system is operated by response personnel;
- The results of the modeling system should be immediately available by fax, e-mail, etc., if the model is operated and calculated in research institutes, etc., remote from the accident command center;
- The first forecasts should be available instantly from the request;
- The meteorological data must be easily and rapidly available;
- Forecasts shall be available 24 hours/day.

### **Models**

The modeling system must include at least an oil drift and spreading model, which are combined under the same interface. Other modules like chemical module, ice model, etc. can also be parts of the modeling system.

- Drift model
  - 3-D model with vertical resolution sufficient for surface spill simulation;
  - Has the possibility to take into account also wind forecasts (5 days ahead) and history (few days at least) or should be connected to some operational Baltic Sea oceanographic model (HIROMB, etc.);
  - It should be possible to update the drift forecast simulations by slick observations and improved wind forecasts during the calculation process;
  - Methods to assimilate current meter and other measured data into forecast calculation should be included in the modeling system.
- Spreading model
  - Possible to input data of most common oil types;
  - Includes the weathering processes;
  - Calculates continuously the mass balance of the oil slick.

### **Outputs**

- Trajectories of the mass center of the slick in adjustable time steps;
- The oiled area after specified time periods;
- Possible to store the results in adjustable time steps;
- All the information preferably on sea charts;
- Information of the ice covered areas that are taken into account in drift calculation;
- Possibility to calculate also in the reverse mode for evidence to court documentation.

### **Resolution of the model**

- At open sea approximately 1 to 5 km;
- Near shoreline and in archipelago depending on the roughness of the shoreline, type of archipelago, etc.

**Additional characteristics** (not for the implementation evaluation)

To make more efficient use of the models, following additional features can also be taken into account when developing modeling systems:

- To simulate the effects of oil response measures to the spreading of oil, the impact of booms, the effect of response vessels, etc. could also be incorporated to the modeling system;
- The same modeling system could also be used in connection with SAR operations due to the similarity of the forecast needs and the fact that the drift models often are used by the same personnel.