

2.7 INVENTORY ASSESSMENT TOOLS

2.7.1 Oil

Contracting Party	Name of tool	Applicable area	Calculation parameter(s)	Time horizon	Input	Output	24/7 contact
Belgium	OSERIT https://oserit.naturalsciences.be/	English Channel and North Sea, from 3°W to 57°N	3D Lagrangian particles moving under the combined effect of wind, waves (Stoke's drift), 3D currents and turbulence. Oil module includes spreading, evaporation, emulsification, natural dispersion and resurfacing (or sinking), chemical dispersion,...	From the web interface, forward and backward simulation can be done in the time window [today-4days, today+4days]. On request to RBINS modelers, simulations can be done in the time window [today – 90 days, today + 4 days]	A large range of predefined release conditions Location, time/duration, oil type, volume/rate, use of dispersants	Maps and figures incl. particle trajectories at the sea surface, in the water column and close to the seabed; Beaching risk and time of first impact; Oil concentration near the sea surface, in the water column and close the seabed; Global exposure time above 0, 1, 10, 100 ppm; Time evolution of the oil mass balance, oil viscosity and oil density.	Commando Marine Operaties (COMOPSNAV) Maritime Security Centre (MIK) T: +32 (0)2 44 30350 F: +32 (0)2 44 39658 E-mail: mik@mil.be
	FLOAT (OSERIT backup tool) https://odnature.naturalsciences.be/float/	English Channel and North Sea, from 4°W to 57°N	Vectorial addition of wind and current. Wind forcing comes from UKMO global NWP. Current forcing produced by the "OPTOS V1" modelling suite operated by RBINS	forward and backward simulation can be done in 4-days time window [today-4days, today+4days].	Time, position, object type or downwind - crosswind leeway coefficient	Oil spill trajectory	Commando Marine Operaties (COMOPSNAV) Maritiem Informatie Kruispunt (MIK) T: +32 (0)2 44 30350 F: +32 (0)2 44 39658 E-mail: mik@mil.be
Denmark	FCOO Seatrack Web	North Sea, Baltic	Particle based (lagrangian model) using forcing from	Back-tracking and forecasting for	Time/duration, position, oil type, age,	Dynamic maps, tables and graphs.	Defence Command Denmark Joint Operations Centre,

Contracting Party	Name of tool	Applicable area	Calculation parameter(s)	Time horizon	Input	Output	24/7 contact
		Sea	FCOO operational ocean (GETM) and wave (WW3) models, together with atmospheric forcing from DMI. Calculates oil particles and cloud trajectories, dispersion, spreading, oil weathering. Basic ice effects on drift and weathering.	time intervals between minus one month and up to 54 hours in future; 15 min resolution.	kind of spill. Possible to use images from remote sensing as input.	Integrated AIS viewer shows ship tracks in the vicinity of the spill trajectory.	Maritime Assistance Service T: +45 72 85 03 71 F: +45 72 85 03 84 E-mail: mas@sok.dk
EU/EMSA	OILMAP	World wide	Vectorial addition of current and wind and oil characteristics in relation to behavior/ Lagrangian model for oil fate and drift.	Depending in input data	Date, time, position, location, type and amount of oil, duration of release	Trajectory Maps (maps oil drift), mass balance on water (weathering), shoreline impact. Hindcasting.	EMSA MSS: T : +351 211 209 415 F : +351 211 209 480 E-mail: MaritimeSupportServices@emsa.europa.eu
France	MOTHY http://www.meteorologie.eu.org/mothy/	World wide	MOTHY is a superparticle-type model. Drift is calculated combining wind and current data. Upper ocean drift from wind speed uses a sophisticated Ekman-layer scheme.	5 days forward/ 19 days backward, with one-hour steps (real time answer) several years (delayed time answer)	Spill location, date and time, type of oil. Current. Wind.	Maps and files in specific formats (GIS, KMZ, etc...)	Service available via Météo-France, Cedre, Préfectures Maritimes, CROSS/MRCC. --- CROSS JOBOURG (Jobourg Coastguard) T: +33 2 33 52 16 16 F: +33 2 33 52 71 72 E-mail : jobourg@mrccfr.eu
	Oilmap/Chemmap http://www.asascience.com/software/oilmap/	World wide	Vectorial addition of current and wind and oil characteristics in relation to behavior/ Lagrangian model for oil and chemical drift. Gaussian model for	Depending in input data (up to 5 days)	Date, time, position, location, type and amount of pollution, duration of slick Winds & currents (EDS: Environmental Data)	Maps (oil and chemical drift), mass balance on water (weathering), shoreline impact/ Backtracking (GIS output: shape, KML;	Cedre ¹ T : +33 2 98 33 10 10 F : +33 2 98 44 91 38 E-mail: intervention@cedre.fr

¹ All emergency contacts to be made by phone first.

Contracting Party	Name of tool	Applicable area	Calculation parameter(s)	Time horizon	Input	Output	24/7 contact
			atmospheric dispersion.		Server™ integration), temperature	Images and videos output: AVI and Jpeg)	
	Adios	Area Independent	Specifics algorithms / forecasts the weathering processes and characteristics of oil slicks	5 days	Date, time, type and amount of pollution, duration of slick	Graph mass balance (density, viscosity, evaporation, dispersion etc ...)	Cedre T : +33 2 98 33 10 10 F : +33 2 98 44 91 38 E-mail: intervention@cedre.fr
Germany	BSH Seatrack Web http://stw.bsh.de/seatrack	North Sea, Baltic Sea, Elbe estuary	Particle based (Lagrangian model) using atmospheric forcing from DWD and hydrodynamic model output from BSH (HBM, BSHcmod); oil module including spreading, evaporation, emulsi-fication, dispersion, etc; basic ice effects on drift.	Back-tracking and forecasting for time intervals between 2007 and up to 72 hours in future; 15 min resolution.	Location, time/duration, oil type, volume/rate, use of dispersants	Trajectory, oil state and distribution (surface, dissolved, shore); Maps, graphs, tables, xml files, animation in webinterface	Central Command for Maritime Emergencies (CCME) T: +49 4721 567 485 / 392 F: +49 4721 554 744 / 745 E-mail: mlz@havariekommando.de
	BSHdmod.L	North Sea, Baltic Sea	Particle based (Lagrangian model) using atmospheric forcing from DWD and hydrodynamic models from BSH (BSHcmod); oil module including spreading, evaporation, emulsification, natural dispersion, etc. Turbulent diffusion simulated by Monte Carlo method.	Back-tracking and forecasting for time intervals between 2007 and up to 72 hours in future; 15 min resolution.	Location, time/duration, oil type, volume	Trajectory, oil state and distribution (surface, dissolved, shore); Maps, text files, animations	Central Command for Maritime Emergencies (CCME) T: +49 4721 567 485 / 392 F: +49 4721 554 744 / 745 E-mail: mlz@havariekommando.de
Ireland	Oilmap/Chemmap	Irish Pollution	Vectoral addition of current	Depending on	Date, time, position,	Maps, mass on water,	National Maritime

Contracting Party	Name of tool	Applicable area	Calculation parameter(s)	Time horizon	Input	Output	24/7 contact
		Responsibility Zone	and wind and characteristics of oil in relation to behaviour	input data	location, type and amount of pollution	shoreline impact	Operations Centre (NMOC) Dublin T:+353 1 6620922 F: +353 1 6620795 E-mail: mrccDublin@irishcoastguard.ie
<p>(**) The OILMAP model comprises several integrated components. The spill model itself predicts the movement of oil on the water surface and the distribution of oil in the environment (evaporated, in the water column, on the shoreline). For these calculations the spill model relies on environmental data such as wind and currents, physical data such as the proximity of shorelines, and the chemical data that defines the type of oil. Each of these types of data can be input and edited using the appropriate OILMAP component.</p> <p>Spill models available:</p> <p>The basic model is the trajectory and fates model which tracks the oil's movement on the water surface and determines the amount evaporated, dispersed into the water column, and stranded on the shoreline over time.</p> <p>Subsurface model follows the oil's movement both on the water surface and in the water column.</p> <p>Stochastic model performs a large number of oil trajectory simulations using different wind conditions.</p> <p>Receptor model is essentially the stochastic model run in reverse.</p>							
The Netherlands	SARMAP OILMAP CHEMMAP	North Sea, NL-Caribbean- area Bonaire, St Eustatius , Saba	Generic theory on wind and current impact and characteristics of oil in relation to the behaviour. Real tide and weather conditions(data) used.	Depending on input data.	Date, time, position. Location. Type and amount of pollutant.	Maps, mass on water, shore sediment.	Watermanagement- centrum-NL T : +31(0)88-7985000 --- Netherlands CG Centre (1st contact !) T: +31 (0)223 542 300 F: +31 (0)223 658 358 E-mail: ccc@kustwacht.nl
Norway	OpenDrift https://github.com/knutfrode/opendrift/wiki	World wide (data from Thredds servers) 800 m along Norwegian coast	Generic theory on wind, wave and current impact and characteristics of oil in relation to the behaviour.		Date, time, position. Location. Type and amount of pollutant. Choice of forcing models (ocean, waves, atmosphere)	Map Mass on water, shore, evaporated dispersed.	Norwegian Meteorological Institute Forecasting Center for Western Norway T: +47 55236600 E-mail : met.vest@met.no --- Kystverket / Norwegian

Contracting Party	Name of tool	Applicable area	Calculation parameter(s)	Time horizon	Input	Output	24/7 contact
							Coastal Administration T: +47 33 03 4800 F: +47 33 03 4949 E-mail: vakt@kystverket.no
	OD3D (Oil drift model)	Arctic region (20 km resolution) Nordic Sea region (4km resolution) Norwegian coastal region (800m resolution)	Oil mass balance, drift time, oil spill trajectories, stranding	Can initialize 7 days back in time, and run up to 60 hours forecast	Surface wind, significant wave height, peak period, Stokes drift, surface currents, oil weathering characteristics, (60 different oil types), geographical position, date and time, depth of oil spill in water	Oil spill trajectories, mass budget in ASCII format and as graphics	Norwegian Meteorological Institute Forecasting Center for Western Norway T: +47 55236600 E-mail : met.vest@met.no --- Kystverket / Norwegian Coastal Administration T: +47 33 03 4800 F: +47 33 03 4949 E-mail: vakt@kystverket.no
Spain	OILMAP	Spain. Worldwide (if requested).	Winds. Currents. Scenario information. Oil type; parameters.	The model has no limitations. The time horizon depends on the met-ocean input data (Nowadays sources from 1 day up to 5 days)	Date, time, positions, volume, oil type, duration, winds & currents (EDS: Environmental Data Server™ integration), temperature, specific parameters (wind and dispersion) Gis Files	<u>Oil drift</u> (maps, *.shp,*.kml) and shoreline impact. Oil concentration & thickness Weathering Results Graphs and numerical lists. Response options effectiveness GIS Files. Maps.	Service through MRCC. MRCC Madrid T: 34 91 755 9132 F: 34 91 526 1440 E-mail: cnccs@sasemar.es
United Kingdom	OILMAP	Worldwide	A trajectory model using a large number of Lagrangian	Adjustable	Date, time, position, metocean data (direct	Comprehensive graphical displays	Maritime and Coastguard Agency

Contracting Party	Name of tool	Applicable area	Calculation parameter(s)	Time horizon	Input	Output	24/7 contact
			particles to simulate the trajectory, as well as a number of algorithms which account for hydrocarbon spreading, evaporation, emulsification, entrainment, and shoreline interactions.		feed from UK Met Office), type and amount of pollution	including maps, graphs, and tables of mass on water, shoreline impact. GIS outputs	Falmouth Maritime Rescue Co-ordination Centre T :+44 (0) 1326 317 575 F : +44 (0) 1326 318 342 E-mail: falmouthcoastguard@mcga.gov.uk

2.7.2 Chemicals (HNS)

Contracting Party	Name of tool	Applicable area	Calculation parameter(s)	Time horizon	Input	Output	Availability
Belgium	HNS-MS https://www.hns-ms.eu/	Greater North Sea (BA region)	3D Lagrangian particles moving under the combined effect of wind, waves (Stoke's drift), 3D currents, turbulence and buoyancy. HNS fate module includes spreading, evaporation, dissolution, natural dispersion, sinking and resurfacing...	4-days time window [today-4days, today+ 4days]. Met-Ocean forcing from Copernicus Marine Environment Monitoring Service	A large range of predefined release conditions Location, time/duration, HNS type from HNS-MS data base or from blank, volume/rate,...	Maps and figures incl. particle trajectories (surface, water column, near sea bed); Beaching risk, time of first impact; concentration maps of condensed fraction (liquid/solid) near surface, in water column, near seabed; concentration maps of dissolved fraction near surface, in water column, near seabed; Concentration maps of evaporated fraction at 10 & 50m; Global exposure time above 0, 1, 10, 100 ppm; Time evolution of HNS mass balance.	<u>From 2019 onwards</u> Naval Operations Command (COMOPNAV) Maritime Security Centre (MIK) T: +32 (0)2 44 30350 F: +32 (0)2 44 39658 E-mail: mik@mil.be
EU/EMSA	CHEMMAP	World wide	Vectorial addition of current and wind and chemical characteristics in relation to behavior/ Lagrangian model for chemicals fate and drift. Gaussian model for atmospheric dispersion.	Depending in input data	Date, time, position, location, type and amount of chemical, duration and depth of release	Trajectory maps (maps chemical drift), mass balance on water (weathering), shoreline impact.	EMSA MSS: T : +351 211 209 415 F : +351 211 209 480 E-mail: MaritimeSupportServices@emsa.europa.eu

France	Chemmap http://www.asascience.com/software/chemmap/	World wide	Vectorial addition of current and wind and chemical characteristics in relation to behavior/ Lagrangian model for chemical drift. Gaussian model for atmospheric dispersion.	Depending in input data (up to 5 days)	Date, time, position, location, pollution type and amount, duration and depth of slick, release area or release thickness. Winds & currents (EDS: <u>Environmental Data Server™</u> integration), temperature, specific parameters (wind and current dispersion)	Maps (chemical drift), Concentration maps water column and atmosphere, mass balance on water (weathering), shoreline impact (GIS output: shape, KML; Images and videos output: AVI and Jpeg)	Cedre T : +33 2 98 33 10 10 F : +33 2 98 44 91 38 E-mail: intervention@cedre.fr
Germany	BSHdmod.E	North Sea, Baltic Sea	Eulerian dispersion model using atmospheric forcing from DWD and hydrodynamic model output from BSH (BSHcmod), without chemical reaction part	Forecasting for time intervals between 2007 and up to 72 hours in future; 15 min resolution.	Location, depth, time, concentration	Concentration maps, text files and animations	Central Command for Maritime Emergencies (CCME) T: +49 4721 567 485 / 392 F: +49 4721 554 744 / 745 E-mail: mlz@havariekommando.de
The Netherlands	CHEMMAP BIGKaleidos Verschuren EASI-View Chemiekaarten.nl Chem-toc Hommel	North Sea NL-Caribbean- area Bonaire, St Eustatius , Saba Worldwide	chemical-databases				Watermanagement-centrum-NL T : +31(0)88-7985000 --- Netherlands Coast Guard Centre (1st contact) T: +31 (0)223 542 300 F: +31 (0)223 658 358 E-mail: ccc@kustwacht.nl
Spain	CHEMMAP (in the process of integration)	Spain. Worldwide (if requested).	Winds. Currents. Scenario information. Chemical type; parameters.	The model has no limitations. The time horizon depends on the met-ocean input data (Nowadays sources from 1	Release information (Date, time, simulation type, simulation length, positions, amount, chemical type, duration... Winds & currents (EDS: <u>Environmental Data Server™</u> integration),	<u>Chemical drift</u> (maps, *.shp,*.kml) and shoreline impact. Weathering Results Graphs and numerical lists. Boom and dispersant	Technical expert team. (upon request)

				day up to 5 days)	temperature, specific parameters (wind and dispersion). Gis Files.	effectiveness GIS Files. Maps.	
United Kingdom	CHEMSIS	UK waters	Chemical database floater, sinker, evaporator, dissolver co-efficients. Vectorial wind tide.	Hours to months	Chem species wind speed/direction, date, time, position, temperature.	Evaporate, dissolve, sink, percentage geographical track. Output can feed Aloha	Maritime and Coastguard Agency Falmouth Maritime Rescue Co-ordination Centre T :+44 (0) 1326 317 575 F : +44 (0) 1326 318 342 E-mail: falmouthcoastguard@mcga.gov.uk

2.7.3 Floating objects

Contracting Party	Name of tool	Applicable area	Calculation parameter(s)	Time horizon	Input	Output	24/7 contact
Belgium	OSERIT https://oserit.naturalsciences.be/	English Channel and North Sea, from 4°W to 57°N	3D Lagrangian particles moving under the combined effect of wind, waves (Stoke's drift), 3D currents and turbulence. Oil module includes spreading, evaporation, emulsification, natural dispersion and resurfacing (or sinking), chemical dispersion,... Wind forcing comes from UKMO global NWP. Current forcing are produced by the "OPTOS V2" modelling suite operated by RBINS. Waves forcing are produced by the WAM modelling suite operated by RBINS.	From the web interface, forward and backward simulation can be done in the time window [today-4days, today+4days]. On request to RBINS modelers, simulations can be done in the time window [today – 90 days, today + 4 days]	Time, position, object type or downwind - crosswind leeway coefficient	Maps and figures	Commando Marine Operaties (COMOPSNAV) Maritiem Informatie Kruispunt (MIK) T: +32 (0)2 44 30350 F: +32 (0)2 44 39658 E-mail: mik@mil.be
	FLOAT (OSERIT backup tool) https://odnature.naturalsciences.be/float/	English Channel and North Sea, from 4°W to 57°N	Vectorial addition of wind and current. Wind forcing comes from UKMO global NWP. Current forcing produced by the "OPTOS V1" modelling suite operated	forward and backward simulation can be done in the time window [today-4days,	Time, position, object type or downwind - crosswind leeway coefficient	Object trajectory	Commando Marine Operaties (COMOPSNAV) Maritiem Informatie Kruispunt (MIK) T: +32 (0)2 44 30350 F: +32 (0)2 44 39658

Contracting Party	Name of tool	Applicable area	Calculation parameter(s)	Time horizon	Input	Output	24/7 contact
			by RBINS	today+4days].			E-mail: mik@mil.be
	SARIS	Belgian part of the North Sea	Vector addition of wind and current Wind from in-situ observations surface current from RBINS models.	A few hours ahead.	Time, position, object type	Search area determination (SAD) based on the simulated object trajectory as well as the search area coverage (SAC)	MRCC Oostende T: +32 59 701000 F: +32 59 703 605 E-mail: mrcc@mrcc.be
Denmark	FCOO Seatrack Web	North Sea, Baltic Sea	Particle based (lagrangian model) using forcing from FCOO operational ocean (GETM) and wave (WW3) models, together with atmospheric forcing from DMI. Calculates particle trajectories.	1 month in hindcast and 60 hours in forecast	Time, position, wind factor.	Dynamic maps, tables and graphs.	Defence Command Denmark Joint Operations Centre, Maritime Assistance Service T: +45 72 85 03 71 F: +45 72 85 03 84 E-mail: mas@sok.dk
France	MOTHY http://www.meteorologie.eu.org/mothy/	World wide	2 versions: one for cargo containers and one for 72 SAR targets (http://www.meteorologie.eu.org/mothy/doc/sar/cibles-sar.html). Drift is calculated combining wind and current data. Upper ocean drift from wind speed uses a sophisticated Ekman-layer scheme.	5 days forward/ 19 days backward, with one-hour steps (real time answer) several years (delayed time answer)	Location, date and time, type of target. Current. Wind.	Maps and files in specific formats (GIS, KMZ, etc...)	Service available through Météo-France, CEDRE, Préfectures Maritimes, CROSS/MRCC. --- CROSS JOBOURG (Jobourg COASTGUARD) T: +33 2 33 52 16 16 F: +33 2 33 52 71 72 E-mail : jobourg@mrccfr.eu

Contracting Party	Name of tool	Applicable area	Calculation parameter(s)	Time horizon	Input	Output	24/7 contact
Germany	BSH Seatrack Web http://stw.bsh.de/seatrack	North Sea, Baltic Sea, Elbe estuary	Particle based (Lagrangian model) using atmospheric forcing from DWD and hydrodynamic model output from BSH (HBM, BSHcmod); wave induced Stokes drift; basic ice effects on drift	Back-tracking and forecasting for time intervals between 2007 and up to 72 hours in future; 15 min resolution.	Location, depth, time, direct wind effect estimate	Trajectory Maps, graphs, tables, xml files, animation in webinterface	Central Command for Maritime Emergencies (CCME) T: +49 4721 567 485 / 567 392 F: +49 4721 554 744 / 745 E-mail: mlz@havariekommando.de
	BSHdmod.L	North Sea, Baltic Sea	Particle based (Lagrangian model) using atmospheric forcing from DWD and hydrodynamic models from BSH (BSHcmod); Turbulent diffusion simulated by Monte Carlo method.	Back-tracking and forecasting for time intervals between 2007 and up to 72 hours in future; 15 min resolution.	Location, depth, time, direct wind effect estimate	Trajectory Maps, text files, animations	Central Command for Maritime Emergencies (CCME) T: +49 4721 567 485 / 567 392 F: +49 4721 554 744 / 745 E-mail: mlz@havariekommando.de
The Netherlands	SARMAP	North-sea NL-Caribbean- area Bonaire, St Eustatius , Saba	Depending on object.	Adjustable	Wind and current. Position. Proportion above/under sea surface.	Maps	Watermanagement-centrum-NL - T : +31(0)88-7985000 --- Netherlands Coast Guard Centre (1st contact) T: +31 (0)223 542 300 F: +31 (0)223 658 358 E-mail: ccc@kustwacht.nl
United Kingdom	SARIS v4	UK EEZ	Uses Monte Carlo localization particle based methodology to establish search area; and the three points models of datum point, datum line and backtrack SAR planning	Adjustable	Position, date, time, wind and current, object specifications	Object drift trajectories	Maritime and Coastguard Agency Falmouth Maritime Rescue Co-ordination Centre T :+44 (0) 1326 317 575 F : +44 (0) 1326 318 342 E-mail: falmouthcoastguard@mcga.gov.uk

Contracting Party	Name of tool	Applicable area	Calculation parameter(s)	Time horizon	Input	Output	24/7 contact
							v.uk
Norway	Shipdrift	Arctic region (20 km resolution) Nordic Sea region (4km resolution) Norwegian coastal region (800 m resolution)	Drift time, trajectories, stranding	Can initialize 7 days back in time, and run up to 60 hours forecast	Surface wind, significant wave height, peak period, Stokes drift, surface currents, ship dimensions, geographical position, time and date, uncertainty radius	Ship drift trajectories, in ASCII format and as graphics	Norwegian Meteorological Institute Forecasting Center for Western Norway T: +47 55236600 E-mail : met.vest@met.no --- Kystverket / Norwegian Coastal Administration T: +47 33 03 4800 F: +47 33 03 4949 E-mail: vakt@kystverket.no
	Leeway (Drifting objects)	Arctic region (20 km resolution) Nordic Sea region (4km resolution) Norwegian coastal region (800 m resolution)	Drift time, trajectories, stranding	Can initialize 7 days back in time, and run up to 60 hours forecast	Surface wind, surface currents, object type, drift characteristics	Object trajectories, in ASCII format and as graphics	Norwegian Meteorological Institute Forecasting Center for Western Norway T: +47 55236600 E-mail : met.vest@met.no --- Kystverket / Norwegian Coastal Administration T: +47 33 03 4800 F: +47 33 03 4949 E-mail: vakt@kystverket.no
Spain	SARMAP	Spain. Worldwide (if requested).	Winds. Currents. Scenario information. Object type; parameters. Units capabilities.	The model has no limitations. The time horizon depends on the met-ocean input data (Nowadays	Date, time, positions, (EDS: Environmental Data Server™ integration), Units (types and characteristics) in	Object drift (*.shp,*.kml) SAR Area. POD, POC and POS. SRU Deployment and Search Pattern.	Service through MRCC. MRCC Madrid T: 34 91 755 9132 F: 34 91 526 1440 E-mail: cncs@sasemar.es

Contracting Party	Name of tool	Applicable area	Calculation parameter(s)	Time horizon	Input	Output	24/7 contact
				Sources from 1 day up to 5 days)	order to be deployed. Gis Files.	GIS Files. Maps.	

2.7.4 Gas clouds

Contracting Party	Name of tool	Applicable area	Calculation parameter(s)	Time horizon	Input	Output	24/7 contact
France	ALOHA	Area Independent	Simulation model of dispersion of gas or evaporating chemicals in atmosphere.		Weather condition, Chemical selected from CAMEO database		Cedre T : +33 2 98 33 10 10 F : +33 2 98 44 91 38 E-mail: intervention@cedre.fr
Germany	MEMPLEX-MET						Central Command for Maritime Emergencies (CCME) T: +49 4721 567 485 / 567 392 F: +49 4721 554 744 / 745 E-mail: mlz@havariekommando.de
United Kingdom	CHEMMAP	Worldwide	CHEMMAP contains an in-built atmospheric dispersion model, a particle tracking model that requires information on surface winds and atmospheric stability.	Adjustable			Maritime and Coastguard Agency Falmouth Maritime Rescue Co-ordination Centre T :+44 (0) 1326 317 575 F : +44 (0) 1326 318 342 E-mail: falmouthcoastguard@mcca.gov.uk
	ALOHA	UK EEZ					Ricardo-AEA, National Chemical Emergency Centre