



Inventory of EU Member States' Policies and Operational Response Capacities for Hazardous and Noxious Substances Marine Pollution 2013



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- www.containershipping.nl/casualties; Page 44.
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INTRODUCTION

In accordance with Regulation (EC) No 1891/2006 amending Regulation (EC) No 1406/2002, EMSA is given the task to “draw up on a regular basis a list of the private and state pollution response mechanisms and response capabilities in the various regions of the European Union”.

In order to fulfil this task of providing accurate and up to date information on the pollution preparedness and response mechanisms and capabilities of the EU and EFTA/EEA coastal States, EMSA contacts the competent authorities in each State and prepares specific inventories such as this Inventory of EU Member States' Policies and Operational Response Capacities for HNS* Marine Pollution (HNS Inventory).

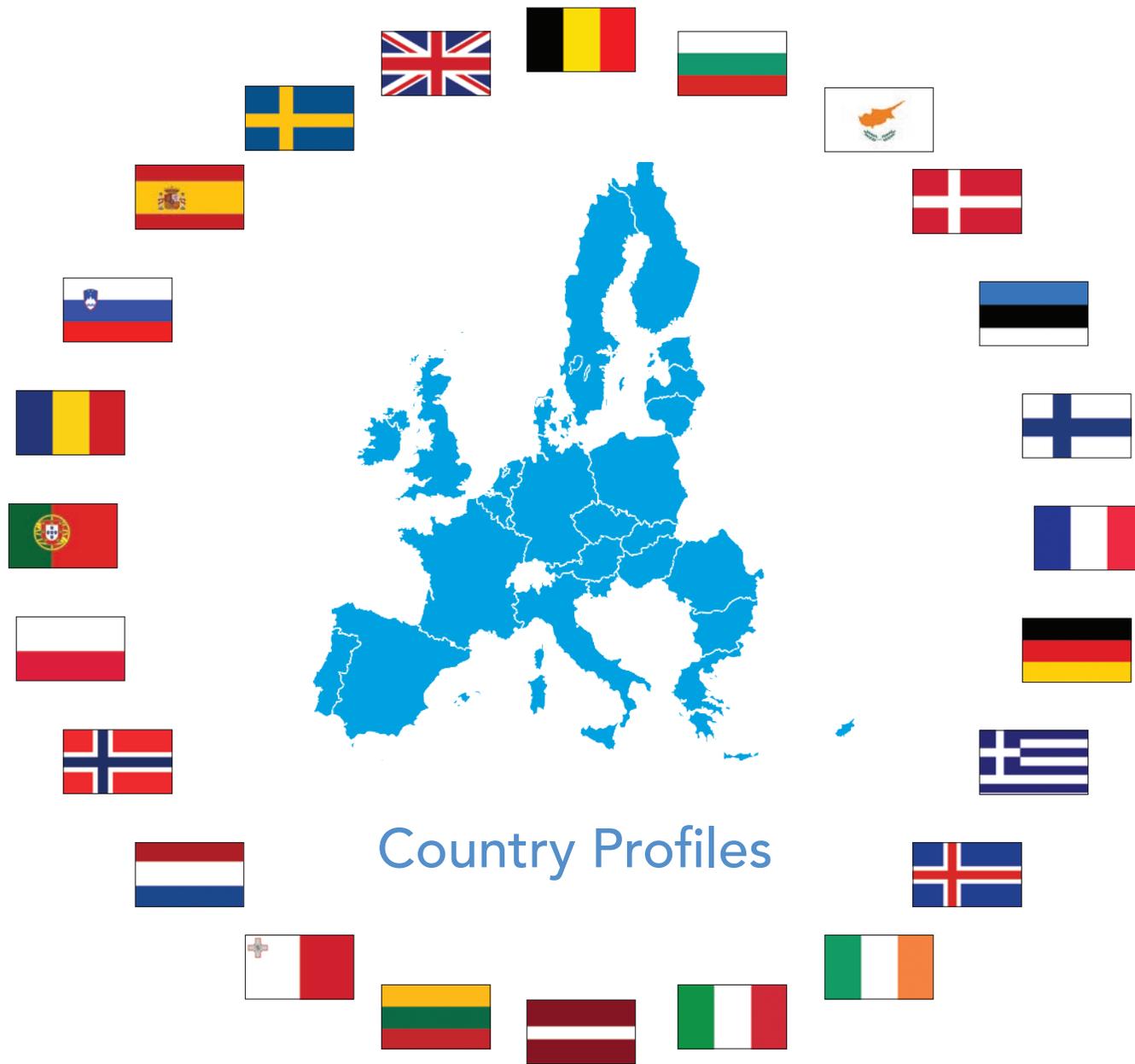
This update is based on information provided and verified by the competent national authorities in each Member

State, reflecting changes which may have occurred since 2010. It replaces the 2010 HNS inventory and is meant to provide a general description of the status of preparedness and response capabilities to marine incidents involving HNS in coastal EU and EFTA/EEA States. It includes a description of the competent authorities, the policies, and the preparatory arrangements of each State.

Describing the status of the HNS response capability around Europe has proven to be rather difficult. The level of preparedness and availability of specialised resources varies significantly between countries, hence the concept of what can be considered “high” versus “low” capacity is somewhat subjective. This means that what is considered as a very important resource in one country might be almost completely disregarded by another country.

Furthermore, the type of equipment commonly used in marine incidents involving HNS is not as straightforward as in oil pollution response. There are a vast number of chemicals that could potentially be encountered in a marine HNS incident. Since each chemical may behave in a different way once released in the marine environment, a variety of monitoring and response equipment and tools may be needed. This equipment is not necessarily stored by any one agency or authority, but may, in case of a real incident, be made available through various sources. It can therefore be extremely difficult to know exactly what is available in advance, particularly in relation to private companies and the salvage industry.

EMSA would like to thank all parties that have contributed to the content of this inventory.







Competent national authority responsible for marine pollution by HNS:
The Directorate-General Environment (Federal Public Service Health, Food Chain Safety and Environment)

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Belgium has not yet acceded to the OPRC-HNS Protocol 2000. However, all the provisions of the OPRC-HNS Protocol 2000 are covered by existing national legislation and provisions of regional agreement (Bonn Agreement). The accession procedure is still pending.

The federal parliament is about to adopt the law of accession to the OPRC-HNS protocol as regards the federal

competencies at sea. This will be done by the end of 2012. The three regional governments have still to do the same for their competencies in maritime harbour areas.

1.2. National contingency plan (NCP)

HNS is not specifically addressed in the NCP. This matter is dealt with in the operational plans for combating (oil) spills at sea, which is attached to the NCP. This document covers the response both to oil spills and HNS spills. The development of two separate sets of operational plans, one for oil spills and one for HNS spills, is being considered.

1.3. Risk assessment

An update of the risk analysis was carried out in 2008. The conclusion pointed out the need for Belgium to complement its national stockpile with additional response equipment for dealing with incidents involving HNS on board vessels.

1.4. Previous experience

Belgium has been involved in some marine incidents with HNS. See table 1.

Table 1

Year	Vessel	Location	Substance		
			Name	Chemical behaviour	Quantity spilled
1984	MONT LOUIS	Off Ostend	Uranium hexafluoride	Unknown	30 cylinders with 15 tonnes each
1987	HERALD OF FREE ENTERPRISE	Port of Zeebrugge	Mixed packaged hazardous substances: tribasic lead sulphate; toluene di-isocyanate; paint wastes; hydroquinone; leather paint; diluted cyanine solutions; liquefied and pressurized gases	Unknown	Unknown
1993	SHERBRO	60 nm west of Cherbourg, Normandy	Mixed packaged hazardous substances: pesticides, nitrocellulose, sulphur, phenol, methyl-ketone; flammable product	Unknown	88 containers



1999	EVER DECENT	Off Dover, England	Containers on fire, toxic gas cloud, dioxins	Gas/ Evaporator	Unknown
2008	ANTISANA SAFI	Ruisbroek (Seecanal Brussels – Scheldt)	Phosphoric acid	Dissolver	Unknown
2008	METHANIA	Zeebrugge	Liquefied Natural Gas (LNG)	Gas/evaporator	Unknown
2008	STOLT SHEARWATER	Antwerp	Unknown	Unknown	Unknown
2008	URSINE	Sea passage from UK to Zeebrugge	Container with paint lost overboard and damaged containers on deck leaking toluene-di-isocyanate, alkyl-benzene and repneu II B resins	Dissolver; Floaters; Sinkers; Gas/ Evaporator	Unknown
2011	WILSON MOSEL	Sea passage from Norway to Ostend	Ferrosilicium (UN 1408)	Gas/evaporator	0.850 tonnes (bulk and big bags) partly contaminated by water

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

The Management Unit of the North Sea Mathematical Models (MUMM) is responsible for the monitoring of a pollutant at sea or coordination thereof. Belgium has the following specialised devices for surveillance, monitoring and evaluation of HNS releases in the marine environment:

- HNS forecasting models: some HNS dispersion modelling capacity available at MUMM;
- Devices for measuring toxic atmosphere: portable/transportable equipment included in HNS incident response teams kit;
- Other measuring devices (e.g. oxygen meter, pH meter, flash point meter, etc.): portable/transportable equipment included in HNS incident response teams kit;

- Sampling devices (including bottom sampling devices): equipment on board research vessel BELGICA (Belgian Sciences Policy Office).

2.2. Response capability

Belgium's capability for responding to marine incidents involving HNS is rather limited and mainly focused on the control of leaks and handling of damaged HNS in packaged form. For the specific equipment, see table 2.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Belgium does not have any specialised vessels for dealing with marine incidents involving HNS. The Belgian Navy has minehunters with over pressurised bridge (citadel) and sonar equipment available.

2.2.2. Specialised response teams

Belgium uses the trained response personnel of the Civil Protection. A specific training for interventions at sea and on board vessels is being considered.

2.2.3 Scientific support

The MUMM, a department of the Royal Belgian Institute of Natural Sciences, can assist with scientific advice, environmental impact assessment and monitoring. Belgium has scientific support on the following areas:

- Human and health safety: Civil Protection and Fire brigade and Private experts from chemical industry;
- Environmental toxicology: MUMM and Civil Protection and Private experts from chemical industry;
- Other areas: MUMM: Environmental impact assessment and monitoring.



Table 2

Vessels and special storage devices/storing arrangements in place for recovered HNS				
Equipment	Quantity	Characteristics	Location	Contact point
Containers of response equipment for intervention on HNS spills	Several containers	Temporary HNS storage tanks: 4 x Fastank of 10,000 l each and 10 oversize drums 220 l and 1 x vacuum tank INOX ADR 8,000 l capacity	Jabbeke	Directorate-General Environment

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

A specific HNS response exercise programme has been considered but not yet implemented. Response personnel of the Civil Protection routinely perform non-maritime specific HNS spill response drills.

3.2. Needs and suggestions for more specialised training programmes

There is a need of maritime specific training for responding to HNS accidents (on board vessels and for lost cargoes)

and all opportunities for training will be taken into consideration

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

Belgium could provide experts in HNS from civil protection, fire brigade and experts from chemical industry as well as specialised leak control, pumping and temporary storage equipment for a wide range of HNS suitable for use in hazardous atmosphere, to other Member States, in case of an HNS spill incident.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
No	No	Yes	Yes	Limited	Limited	Yes	Not specialised	Yes	Yes	No





Competent national authority responsible for marine pollution by HNS:
The Executive Agency for Maritime Administration of the Ministry of Transport, Information Technologies and Communications

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Bulgaria has not ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

Bulgaria does not specifically cover the response to HNS in the national contingency plan.

1.3. Risk assessment

Bulgaria started some preliminary work on collecting of statistical data.

1.4. Previous experience

Bulgaria has not been involved in any major marine accidents involving HNS; only one small incident has occurred. See table 1.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Bulgaria has vessels for the visual monitoring of floating coloured substances and for locating floating packaged goods.

2.2. Response capability

Bulgaria's capability for responding to marine incidents involving HNS is very limited and mainly relies on the same resources as for oil pollution response.

There are no special storage devices or storage arrangements in place for recovered HNS. Floating cranes and barges may be used for recovery and as a temporary storage of packaged goods.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Bulgaria does not have specialised safety equipment for HNS response. Bulgaria does not have any specialised

Table 1

Year	Vessel	Location	Substance		
			Name	Chemical behaviour	Quantity spilled
2005	FS ODIN	Bulgarian waters	Styrene monomer	Floater/Evaporater	Insignificant



vessels for dealing with marine incidents involving HNS, but there is the possibility of using fire-fighting tugs for the suppression of water soluble gas clouds.

2.2.2. Specialised response teams

Bulgaria does not have a specialised response team for marine incidents involving HNS. There are trained personnel only for shore response - chemical biological, radiation and nuclear threats protection Sector in Chief Directorate Fire Safety and Civil Protection under the Ministry of the Interior.

2.2.3. Scientific support

The Bulgarian Ministry of Transport, Information Technologies and Communications does not have a

specialised body to provide scientific advice on marine incidents involving HNS.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

Bulgaria has no regular exercises and training programmes for vessels, aircrafts and personnel involved in HNS pollution response.

3.2. Needs and suggestions for more specialised training programmes

No answer was provided.

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

Bulgaria cannot provide assistance to other Member States in case of an HNS spill incident.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
No	No	No	Yes, minor	Very limited	Very limited	No	No	Very limited	No	No



Competent national authority responsible for marine pollution by HNS:
The Department of Fisheries & Marine Research (DFMR) of the Ministry of Agriculture, Natural Resources and Environment

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Cyprus has not ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

Cyprus does not specifically cover response to HNS in their national contingency plan.

1.3. Risk assessment

Cyprus has not made any risk assessment specifically aimed at marine transport of HNS.

1.4. Previous experience

Cyprus has not been involved in any marine accidents involving HNS.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Cyprus does not have any specialised equipment for the monitoring of marine spills of HNS.

2.2. Response capability

Cyprus' capability for responding to marine incidents involving HNS is very limited and mainly relies on the same resources as for oil pollution response.

2.2.1 Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

The Cyprus Fire Department maintains specialised personal safety equipment for responding to shore based HNS accidents, including port areas but does not have any specialised vessels for dealing with marine incidents involving HNS.

2.2.2 Specialised response teams

Cyprus does not have a specialised response team for marine incidents involving HNS.

2.2.3 Scientific support

Cyprus does not have a specialised body which provides scientific advice on marine incidents involving HNS.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

No training is currently conducted.

3.2. Needs and suggestions for more specialised training programmes

Cyprus sees a need for more specialised training programmes and exercises regarding HNS marine pollution response. Cyprus would be interested to participate in HNS dedicated training programmes organised within IMO and EU/EMSA.



4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

Not applicable.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
No	No	No	No	No	Very limited	Limited	No	No	No	No



Competent national authority responsible for marine pollution by HNS: *The Ministry of Defence*

The Ministry of Defence has delegated the contingency functions to Defence Command Denmark, which for its part has delegated the contingency functions to the Admiral Danish Fleet (Royal Danish Navy).

The Admiral Danish Fleet is responsible for response to pollution on the high seas and in coastal waters, while the municipal councils are responsible for response to pollution on the shoreline. The local authorities are responsible for response to pollution in ports and harbours.

The Environmental Protection Agency (EPA) under the Ministry of the Environment and Energy is responsible for the administration of legislation concerning environmental protection (the Danish Act for the Protection of the

Marine Environment) and environmental regulation of offshore activities.

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Denmark has ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

Denmark does not specifically cover response to HNS in their national contingency plan.

1.3. Risk assessment

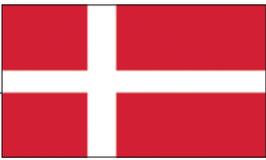
Denmark has made a risk assessment which specifically included marine transport of HNS. This HNS risk assessment is based on the Danish Risk Analysis for the Danish waters 2007.

1.4. Previous experience

Denmark has been involved in marine incidents involving HNS. See table 1.

Table 1

Year	Vessel	Location	Substance		
			Name	Chemical behaviour	Quantity spilled
1984	DANA OPTIMA	North Sea	Dinitrobutylphenol (Dinoseb)	Unknown	16 tonnes
2003	FU SHAN HAI	Off Bornholm Island, Denmark	Potash	Dissolver	66,000 tonnes
2008	KEMIRA GAS	Great Belt	Liquefied ammonia	Gas/dissolver	8,500 tonnes
2008	YARA GAS III	Off Hanstholm	Liquefied Petroleum Gas (LPG)	Gas/evaporator	Unknown



2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Denmark does not have any specialised equipment for the monitoring of marine spills of HNS, but the Danish Emergency Management Agency (DEMA) has measuring instruments that can monitor HNS on ships and on the sea surface, and sampling devices.

Aircraft from the Royal Danish Air Force can carry out aerial surveillance. The planning of aerial surveillance is done in direct coordination between the Royal Danish Air Force and the Admiral Danish Fleet.

Denmark has the following specialised devices for surveillance, monitoring and evaluation of HNS releases in the marine environment:

- Aerial surveillance;
- HNS forecasting models: DEMA laboratory (air), SEATRACK-WEB;
- Devices for measuring toxic atmosphere: DEMA personnel;
- Sample devices (including bottom sampling devices): DEMA personnel;

- Other measuring devices (e.g. oxygen meter, pH meter, flash point meter, etc): DEMA personnel.

2.2. Response capability

Denmark's capability for responding to marine incidents involving HNS is very limited and mainly relies on the same resources as for oil pollution response. With the existing resources, only recovery of undamaged drums and containers can be undertaken.

2.2.1 Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Denmark has specialised safety equipment for HNS response (DEMA), but does not have any specialised vessels for dealing with marine incidents involving HNS.

2.2.2. Specialised response teams

Denmark does not have a specialised response team for marine incidents involving HNS, but personnel from DEMA can carry out measuring of HNS leaks.

2.2.3. Scientific support

DEMA Laboratory and Danish "Strålehydrografisk" Institute (Radiographic Beam Hygiene) can support HNS spills in the human health and safety environmental toxicology areas.

Denmark has scientific support in the following areas:

- Human and health safety; DEMA Laboratory and Danish "Strålehydrografisk" Institute;
- Environmental toxicology: DEMA Laboratory.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

Danish environmental exercises include HNS elements.

3.2. Needs and suggestions for specialised training programmes

None for the time being.



4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

Denmark can provide experts in HNS (personnel from DEMA) to other Member States in case of an HNS spill.

See table 3.

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

5. SUMMARY

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
Yes	No	Yes	Yes	Yes	Limited	Yes	No	Not specialised	Yes	Yes





Competent national authority responsible for marine pollution by HNS:
The Police and Border Guard under the Ministry of the Interior

1.1. OPRC-HNS Protocol 2000

Estonia has ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

Estonia does not specifically cover response to HNS in their national contingency plan.

1.3. Risk assessment

Estonia compiles national risk assessments annually, in which marine transport of HNS is one of the topics. The ecological and socio-economic areas sensitive to marine spills have been identified and mapped.

1.4. Previous experience

Estonia has not been involved in any major marine accidents

involving HNS.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Estonia has some specialised equipment for the monitoring of marine spills of HNS: a LET-410 aircraft is available for surveillance and is equipped with SLAR (Side Looking Airborne Radar), FLIR (Front Looking Infrared Radar) and a search and weather radar RDR-1400c.

2.2. Response capability

Estonia's capability for responding to marine incidents involving HNS is very limited and relies on the same resources as for oil pollution response.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Estonia does not have specialised safety equipment, vessels and special storage devices for dealing with marine incidents involving HNS.

2.2.2. Specialised response teams

Estonia does not have a specialised response team for marine incidents involving HNS.

2.2.3. Scientific support

Estonia has a specialised body involving scientists and specialists called the Operational Experts Group which provides scientific advice on marine incidents. However, its capabilities in the field of HNS are not ascertained.

3. TRAINING AND EXERCISES



3.1. Regular exercises and training programmes

Estonia has no regular exercises and training programmes for vessels, aircrafts and personnel involved in HNS pollution response.

3.2. Needs and suggestions for more specialised training programmes

There is a need for specialised trainings and exercises.

There is need to train the crews of vessels and aircrafts and relevant personnel (including commanding personnel – tactical, operational, strategical level) involved in HNS pollution response.

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR

ASSISTANCE

Estonia can provide an airplane with optical remote sensing capabilities (SLAR/FLIR and in the future a helicopter with LIDAR (Light Detecting and Ranging)) to other Member States in case of an HNS spill incident.

5. SUMMARY

See table 3.

1. POLICY AND PREPAREDNESS FOR HNS

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
Yes	No	Yes	No	Very limited	Very limited	No	No	No	Limited	No



Competent national authority responsible for marine pollution by HNS: *The Finnish Environment Institute (SYKE), under the Ministry of Environment*

MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Finland has not ratified the OPRC-HNS Protocol 2000. The ratification is under preparation.

1.2. National contingency plan

Finland's legislation defines the roles and responsibilities of different authorities in case of (HNS) marine pollution thus there is no need to repeat these in an NCP. As operational guidelines, Finland uses HELCOM Response Manual Vol II, IMO guidelines, international guides, etc.

1.3. Risk assessment

Finland has made a risk assessment which included marine transport of HNS. The report "Transportation of liquid bulk chemicals by tankers in the Baltic Sea", published by VTT in 2006, provides an overview of the Baltic HNS traffic and

the associated risks. In addition project the "Chembaltic" evaluates the risks of maritime chemical transportation.

1.4. Previous experience

Finland has only been involved in some minor marine incidents with HNS. Dumped toxic waste barrels were recovered on two separate occasions. The tall oil from the incident in Sweden in December 2011 drifted partly to Finland, two oil recovery vessels were used to collect the highly weathered oil.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Finland has some specialised equipment for the monitoring of marine spills of HNS floaters at the sea surface and evaporators/gases above the sea surface. Also the determination of most gases will be possible after the "Chembaltic" project has been finished. Finland has the

following specialised devices for surveillance, monitoring and evaluation of HNS releases in the marine environment:

- Aerial surveillance: two surveillance aircraft with remote sensing equipment (optical instruments and scanners). Infrared/ultraviolet might be applicable for observation of floating substances at the sea surface;
- Vessel surveillance: oil detection radar has been installed in two response vessels, these radars might have capability to detect also other floating substances;
- Devices for measuring toxic atmosphere: gas detection systems on board vessels are mainly for alarming and self-protection purposes;
- Other measuring devices (e.g. oxygen meter, pH meter, flash point meter, etc): portable meters;
- Sampling devices: the available vessels can take air and water samples, also sediment sampling is possible by core and box samplers;
- Other devices: sonars for location of sinkers and packaged sinkers.

2.2. Response capability



For specific equipment for response to spills of HNS see table 2.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Finland has specialised safety equipment (suits and breathing apparatuses) and specialised vessels for dealing with marine incidents involving HNS.

Finland has specialised vessels for dealing with marine incidents involving HNS. The newest vessel has been constructed according to the chemical recovery rules. The same work profile is applied to a new pollution response

ship that is currently being build.

2.2.2. Specialised response teams

HNS responders and chemical divers in the Navy, Border Guard and Response Regions.

2.2.3. Scientific support

Finland has scientific support in human and health safety area and in environmental toxicology.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

The vessel crews are trained in the use of inert systems, toxicity measuring equipment etc. as part of their annual exercise programme.

3.2. Needs and suggestions for more specialised training programmes

Yes, would be highly beneficial.

4. RESOURCES AVAILABLE TO OTHER

Table 2

Vessels and special storage devices/storing arrangements in place for recovered HNS				
Equipment	Quantity	Characteristics	Location	Contact point
MERIKARHU	1	Possibility of being over-pressurised for one or two hours to work with evacuation of the crew and other important tasks in the vicinity of a chemical spill. Devices for detection of CHX gases.	Gulf of Finland	SYKE duty officer
TURSAS	1	Possibility of being over-pressurised for one or two hours to work with evacuation of the crew and other important tasks in the vicinity of a chemical spill. Devices for detection of CHX gases.	Archipelago Sea	SYKE duty officer
UISKO	1	Possibility of being over-pressurised for one or two hours to work with evacuation of the crew and other important tasks in the vicinity of a chemical spill. Devices for detection of CHX gases.	Archipelago Sea	SYKE duty officer
YAG Louhi	–	Vessel is outfitted for service in a hazardous atmosphere. Permanently installed gas detection and alarm system for the detection of flammable and toxic gases and vapours in the outside atmosphere. CO2 and O2 measurement inside the ship	Gulf of Finland	–



MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

5. SUMMARY

See table 3.

Finland can provide vessels that can be sent to another Baltic Sea country to assist in the response operation – only one recovery vessel is classified to operate outside the Baltic Sea area - and experts in HNS, to other Member States in case of an HNS spill incident.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
No	No	Yes	Yes, minor	Yes	Yes	Yes	Yes	Yes	Yes	Yes





Competent national authorities responsible for marine pollution by HNS:
The three 'préfets maritimes' (PREMAR) for the Mediterranean, Atlantic and North Sea/Channel

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

France has ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

The French response to HNS spills is integrated within the "At sea pollution response" section of the three civil security response organisations (ORSEC MARITIME – global contingency plans for each of the French maritime areas: Mediterranean, Atlantic, Channel and North Sea). All three plans include a chapter on the related available means and experts.

1.3. Risk assessment

France has made some risk assessments specifically aimed at marine transport of HNS.

1.4. Previous experience

France has been involved in some marine incidents with HNS. See table 1.

Table 1

Year	Vessel	Location	Substance		
			Name	Chemical behaviour	Quantity spilled
1997	ALBION TWO	60 nm from Brest, Finistere	Calcium carbide* (packaged in barrels) Camphor ammonia anhydrous	Dissolver	114 tonnes
1997	KAIRO	Off the coast of Royan	Lead tetraethyl	Sinker	6,240 tonnes (3 containers)
1997	MSC ROSA M	France	Hazardous substances, in particular flammable gases and liquids, and corrosive and oxidizing substances.	Unknown	70 tonnes
1999	JUNIOR M	Off the coast of Brest	Ammonium nitrate	Dissolver	700 tonnes (packs)
2000	IEVOLI SUN	Channel, 33 nm west of Cherbourg	Styrene, methyl ethyl ketone, isopropyl alcohol	Floater	Styrene: 3,998 tonnes; Methyl ethyl ketone: 1,027 tonnes; Isopropyl alcohol: 996 tonnes



2001	BALU	Bay of Biscay	Sulphuric acid	Dissolver	8,000 tonnes
2002	BOW EAGLE	English Channel	Ethyl acetate	Evaporator	200 tonnes
2003	ADAMANDAS	French territorial waters of Reunion	Deoxidized iron ore balls* *	Evaporator	1,000 tonnes
2007	NAPOLI	Western Channel, north of Trégastel, Côtes d'Armor	Undefined toxic substances	Unknown	1,700 tonnes
2008	SUSIE (Current name: SINJAR	Off Ouessant, Finistere	Phosphine	Evaporator	8,000 tonnes

* Calcium carbide reacts with water and releases acetylene, a flammable gas.

* * The main danger associated with deoxidized iron ore is its high tendency to reoxidize in the presence of humidity. This reoxidization is a highly exothermic reaction and produces hydrogen.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

France has the following specialised devices for surveillance, monitoring and evaluation of HNS pollution in marine environment:

- HNS behaviour and drifting models;
- Devices for measuring toxic atmosphere and other (e.g. oxygen meter, pH meter, flash point meter);
- Sampling devices (including bottom sampling devices).

2.2. Response capability

For specific equipment for response to spills of HNS see table 2.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Stockpiles include specific safety equipment for teams in charge of operations for HNS pollution response (suits and specific equipment for intervention in toxic atmosphere, containers for leaking barrels, tools and equipment for leaking containers, etc.).

Two of the four emergency high-sea tug boats chartered by the French navy are able to cross a toxic atmosphere during half an hour (citadel ship: ABEILLE LIBERTE in Cherbourg, ABEILLE BOURDON in Brest).

2.2.2. Specialised response teams

France has specialised response teams for marine incidents involving HNS. Trained teams from French navy fire brigades are available for HNS evaluation and HNS pollution operations. Specific teams from French navy high-sea divers companies are also able to operate in polluted waters with specific equipment, tools and Remotely Operated Vehicles (ROV).

Table 2

Vessels and special storage devices/storing arrangements in place for recovered HNS				
Equipment	Quantity	Characteristics	Location	Contact point
Containers for leaking barrels	70	Plastic or metal containers	Cherbourg, Brest and Toulon	Ministry of Defence, French navy



2.2.3. Scientific support

Specialised advice during the response to a marine spill involving HNS will be provided by CEDRE (Centre for Documentation, Research and Experimentation on Accidental Water Pollution), INERIS (National Institute for Risk Evaluation), specialised teams from French navy laboratories and CEPPOL (Centre of practical expertise in pollution response at sea), French navy firemen, and IFREMER (French Research Institute for Exploitation of Sea resources).

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

General training is provided by CEDRE (oil and chemicals pollution training sessions), specific HNS training sessions for French navy firemen (in national firemen schools), specific training course by the French navy for navy divers. Each maritime prefect regularly organises HNS pollution exercises.

3.2. Needs and suggestions for more specialised training programmes

No answer was provided.

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

France cannot provide assistance to other Member States in case of an HNS spill incident.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
Yes	Yes	Yes	Yes	Yes	Specialised	Yes	Yes	Yes	Yes	Yes





Competent national authority responsible for marine pollution by HNS:
The Central Command for Maritime Emergencies (CCME), under the Federal Ministry of Transport, Building and Urban Development

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Germany has ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

Germany covers response to HNS in their national contingency plan.

1.3. Risk assessment

Germany has made some risk assessments specifically aimed at marine transport of HNS.

1.4. Previous experience

Germany has been involved in marine accidents involving HNS. See table 1.

- Other measuring devices (e.g. oxygen meter, pH meter, flash point meter);
- Sampling devices (including bottom sampling devices): only air and water sampling devices.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Germany has the following specialised devices for surveillance, monitoring and evaluation of HNS releases in the marine environment:

- Vessel surveillance: ZMGS (German part of Safe Sea Net);
- HNS forecasting models: Gas clouds, some drifters;
- Devices for measuring toxic atmosphere;

2.2. Response capability

Germany's capability for responding to marine incidents involving HNS is limited to the recovery of mainly packaged goods, floating liquids and lightering operations (excluding gas tankers). However, interventions in highly explosive and toxic atmospheres are possible because of the very sophisticated gas protection and analysing systems on board multipurpose vessels. For the specific equipment for response to spills of HNS see table 2.

Table 1

Year	Vessel	Location	Substance		
			Name	Chemical behaviour	Quantity spilled
1977	BURGENSTEIN	Bremerhaven's port	Sodium peroxide	Unknown	Unknown
1989	OOSTZEE	Mouth of the Elbe River	Epichlorohydrin	Evaporator	Unknown
2000	IEVOLI SUN*	Channel, 33nm west of Cherbourg	Styrene, methyl ethyl ketone, isopropyl alcohol	Floaters	Styrene: 3,998 tonnes; Methylethyl ketone: 1,027 tonnes; Isopropyl alcohol: 996 tonnes
2003	ANDINET**	Northwest of Texel	Arsenic pentoxide	Dissolver	Unknown



2004	ENA II	Hamburg's port	Sulphuric acid	Dissolver	6 tonnes
2007	EXCELSIOR	Near Köln	Acid and fuel additives	Dissolver/Floater	
2008	PATRICIA S.	Brunsbüttel	Metal shavings	Gas/ evaporator	4,800 tonnes
2012	FLAMINIA	Atlantic	Various packaged goods	-	152 DG containers, partly fire damaged

* The accident happened in France's waters, but Germany was involved in the response;

** The accident happened in The Netherlands' waters, but Germany was involved in the response.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

The four gas-protected multipurpose vessels can do sampling of air and water and in situ monitoring of the atmosphere (quantifying and qualifying).

Germany has specialised vessels for dealing with marine incidents involving HNS, including four gas-protected multipurpose vessels (NEUWERK, MELLUM, SCHARHÖRN, and ARKONA) of which two are located in the North Sea and two in the Baltic Sea.

2.2.2. Specialised response teams

Germany has specialised response teams for marine incidents involving HNS. Trained fire brigades are also available.

2.2.3. Scientific support

Germany does not have a specialised body which provides scientific advice on marine incidents involving HNS, but has several experts of varying qualifications (human health

and safety, environmental toxicology, salvage/response) and specialisation which come together on a case-by-case mode to advise the CCME. These experts are from scientific agencies and industry.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

Regular exercises and training programmes are established in Germany for vessels and personnel involved in HNS pollution response.

Table 2

Vessels and special storage devices/storing arrangements in place for recovered HNS				
Equipment	Quantity	Characteristics	Location	Contact point
Gas-protected multipurpose vessels: NEUWERK, MELLUM, SCHARHORN, ARKONA	4	They are all equipped with detection, recovery and storage devices for hazardous substances and accommodation and equipment facilities for additional strike units of 30 persons each	Cuxhaven, Wilhelmshaven, Kiel, Stralsund	CCME
GSS GUSTAV MEYER and GSS BAUMRÖNNE	2	Assisting vessels with gas protection, but without recovery and storage capacity etc.	Emden, Cuxhaven	CCME



3.2. Needs and suggestions for more specialised training programmes

As Germany has a quite detailed exercise programme there is no additional need at the moment.

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

Germany could provide the following types of assistance to other Member States in case of an HNS spill incident:

- Specialised equipment/vessels only;
- Specialised equipment/vessels with trained personnel: ship crew can handle the vessel and assist the response operation of the requesting country;
- Experts in HNS.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
Yes	Yes	Yes	Yes	Yes	Specialised	Yes	Yes	Yes	Yes	Yes





Competent national authority responsible for marine pollution by HNS:
The Ministry of Shipping, Maritime Affairs and the Aegean/Hellenic Coast Guard/Marine Environment Protection Directorate.

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Greece has ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

Greece covers response to HNS in their national contingency plan.

1.3. Risk assessment

Greece has not made any risk assessment specifically aimed at marine transport of HNS.

1.4. Previous experience

Greece has been involved in a limited number of marine incidents involving HNS.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Greece does not have any specialised Government owned equipment for monitoring of marine HNS spills.

Table 1

Year	Vessel	Location	Substance		
			Name	Chemical behaviour	Quantity spilled
1996	KIRA	Off Sapientza Island	Phosphoric acid	Dissolver	7,600 tonnes
1998	SEA-LAND MARINER (Current name: LYS)	-	Phosphorus, barium and oxyacetylene	Unknown	Unknown
1999	MASTROPETROS	About half a nautical mile off Andros Island	Calcium sulphate	Unknown	Unknown
2000	LINA STAR	-	Sodium carbonated	Unknown	1,150 tonnes
2001	VASILIKI (Current name: ALPHA II)	-	Benzene	Evaporator	Unknown
2006	XYMA A.E.(Coastal chemical Installation)	South Evoikos Gulf	Styrene	Evaporator	Unknown*
2007	SICHEM MALAGA	Crete	Chemical/Gas	Unknown	No pollution reported

* While combating a fire in the tanks of the chemical installation, quantities of water used during fire-fighting operations found their way into the adjacent sea.



2.2. Response capability

Greece's capability for responding to marine incidents involving HNS is very limited and mainly relies on the same resources as for oil pollution response.

Although there is a plan to respond to HNS pollution incidents there is a lack of antipollution means and equipment for response to HNS pollution at sea. For the specific equipment for response to spills of HNS, see table 2.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Greece does not have any specialised Government owned safety equipment, vessels or special storage devices for dealing with marine incidents involving HNS.

2.2.2. Specialised response teams

Greece does not have a specialised response team for marine incidents involving HNS.

2.2.3. Scientific support

The Ministry of Health is responsible for recommending emergency measures for mitigating the consequences of the pollution incident on public health. The National Centre for the Research of Physical Sciences "DIMOKRITOS" provides guidelines on the appropriate protection measures and methodology of response (human and health safety) and salvage/response to an incident with radioactive materials. The Hellenic Centre for Marine research can provide scientific support for HNS spills in the Environmental toxicology field.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

Greece does not have a training programme for marine incidents involving HNS.

3.2. Needs and suggestions for more specialised training programmes

Since Greece does not have relevant experience in conducting specialised training programmes and exercises regarding HNS marine pollution response, there is certainly a need for such training programmes. Greece is interested in participating in such programmes which may be organised by EMSA or Member States that have relevant experience.

Table 2

Vessels and special storage devices/storing arrangements in place for recovered HNS				
Equipment	Quantity	Characteristics	Location	Contact point
T/B – OIL REC "AEGIS"	1	Tanks/ deck area	Piraeus	EPE/ EMS1MC
Vacuum Trucks	2	Vacuum Truck - ADR	Piraeus	EPE



Inventory of EU Member States' Policies and Operational Response Capacities for HNS Marine Pollution 2013

Oil/Debris skimmer vessels "AKTEA"	8 1 1 1 1 1	Tanks	Pireus Elefsis Corfu Thessaloniki Chios Rhodes	EPE/EMSMC
A vessel of multiple-use named "ALKIPPI"	1	The vessel may carry on board barrels and IBCs' containers of UN approved type, where recovered HNS may be pumped/transhipped and stored, up to 10m ³ quantity	Port of Thessaloniki	Ilias Orfanidis

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

Greece cannot provide assistance from Government resources to other Member States in case of an HNS spill incident.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised Response teams	Scientific support	
Yes	Yes	No	Yes	No	Very limited	No	No	No	Yes	No





Competent national authority responsible for marine pollution by HNS:
The Environment Agency of Iceland (EAI), under the auspices of the Ministry for the Environment and Natural Resources

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Iceland has not ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

Iceland does not specifically cover response to HNS in their national contingency plan.

1.3. Risk assessment

Iceland has not made any risk assessment specifically aimed at marine transport of HNS. There is limited chemical industry in Iceland and transport of substantial amounts of HNS in Icelandic waters is infrequent, if at all.

1.4. Previous experience

Iceland has not been involved in any significant marine incidents with HNS.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Iceland does not have any specialised equipment for monitoring of marine spills of HNS.

2.2. Response capability

Iceland's capability for responding to marine incidents involving HNS is very limited and mainly relies on the local Fire Departments. Apart from that, Iceland relies on international agreements and cooperation in case of a larger incident.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Individual Fire Departments have equipment available for HNS response. Detailed information on type and quantity are not available.

Iceland does not have any specialised vessels for dealing with marine incidents involving HNS.

2.2.2. Specialised response teams

Iceland does not have a specialised response team for marine incidents involving HNS.

2.2.3. Scientific support

Iceland does not have a specialised body which provides scientific advice on marine incidents involving HNS. General information about HNS is sought from the Fire Departments and the Environment Agency, as the supervising body.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

Iceland has no regular exercises and training programmes for vessels, aircrafts and personnel involved in HNS pollution response.

3.2. Needs and suggestions for more specialised training programmes

Iceland sees a need for specialised training programmes



and exercises regarding HNS marine pollution response, but does not have any suggestions for participation in HNS-dedicated training programmes.

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

5. SUMMARY

See table 3.

Iceland cannot provide assistance to other Member States in case of an HNS spill incident.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
No	No	No	No	No	Very limited	Limited	No	No	Limited	No



Competent national authority responsible for marine pollution by HNS:
The Department of Transport through the Irish Coast Guard (IRCG), Tourism and Sport.

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Ireland has enacted the national legislation to implement the OPRC-HNS Protocol 2000. This legislation commenced in June 2007. The formal ratification papers are currently in the process of being lodged.

1.2. National contingency plan

Ireland will cover response to HNS in their national contingency plan which is in the course of preparation.

1.3. Risk assessment

Ireland is currently preparing a risk assessment specifically aimed at marine transport of HNS.

1.4. Previous experience

Ireland has been involved in marine accidents involving HNS. See table 1.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Ireland does not have any specialised equipment for the monitoring of marine spills of HNS but it has some

modelling capacity and has the ASA CHEMMAP modelling system in place.

The Irish Coast Guard has contracted 4 civilian Search and Rescue helicopters deployed at bases around the coast (3 x Sikorsky S61Ns and 1 x S92). These aircraft can be used for pollution aerial surveillance during daylight hours. Fixed wing aircraft of the Irish Air Corps can be utilised during daylight hours when available. Ireland also has a fully functional AIS system in place around its coastline.

2.2. Response capability

Ireland's capability for responding to marine incidents involving HNS is very limited and mainly relies on the same resources as for oil pollution response.

Table 1

Year	Vessel	Location	Substance		
			Name	Chemical behaviour	Quantity spilled
2010	BG DUBLIN	15m south of County Waterford	Sodium bromate	Dissolver	11.48 tonnes



2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

The Fire Service has a limited quantity of specialised safety equipment for HNS response and does not have any specialised vessels or special storage devices for dealing with marine incidents involving HNS.

2.2.2. Specialised response teams

Ireland does not have a specialised response team for marine incidents involving HNS.

During a major HNS spill, the Director may deploy the Irish Coast Guard's Marine Pollution Response team as part of their Irish Coast Guard's Incident Command System to assume local command of Counter Pollution operations.

This team is made up of Irish Coast Guard and local harbour/port authority personnel.

2.2.3. Scientific support

Ireland does not have a specialised body which provides scientific advice on marine incidents involving HNS.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

Ireland does not have any training courses available in this field. Personnel from the Marine Pollution Response Team have participated in the UK Chemical Strike team training, and personnel from the Coast Guard have attended training courses in the UK for HNS Response.

3.2. Needs and suggestions for more specialised training programmes

Not at present, as staffing resources do not exist at present to expand in this field.

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

Ireland can only provide limited aerial surveillance to other Member States in case of an HNS spill incident

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
No	No	No	Yes	Limited	Very Limited	Limited	No	No	No	No



Competent national authority responsible for marine pollution by HNS:
The Ministry of Environment, the Italian Coast Guard and National Civil Protection Department of the Council of Ministry when a "National emergency is declared

Other entities involved in an HNS incident are the Institute for Environmental Protection and Research (ISPRA) and the Regional Agencies for the Environmental Protection (ARPA). These entities are usually involved to give their technical and scientific support.

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Italy is intending to ratify the OPRC-HNS Protocol 2000.

1.2. National contingency plan

The contingency plan of the Ministry of the Environment for accidental marine pollution by hydrocarbon and other dangerous goods approved in late 1987 is now being updated. The draft of the new plan which takes into consideration procedures to face HNS incidents, is almost finished and is awaiting administrative approval.

The national contingency plan entitled "National emergency response plan against pollution by hydrocarbon derivate and toxic material spilled at sea" of the National Civil Protection Department of the Council of Ministers, has been approved with a Legislative Decree on 4 November 2010.

1.3. Risk assessment

A complete evaluation of the risk assessments provisional vulnerability maps of the Italian harbours and coastal areas has been made.

1.4. Previous experience

Italy has been involved in some marine incidents with HNS. See table 1.

Table 1

Year	Vessel	Location	Substance		
			Name	Chemical behaviour	Quantity spilled
1979	M/N KLEARKOS	3 km south of Tavolara Island (Sardinia)	Many chemicals transported in goods	Unknown	Cargo partially recovered, about 100 tonnes removed from the wreck
1990	VAL ROSANDRA	Port of Brindisi	Propylene	Gas/Evaporator	1,800 tonnes
1991	ALESSANDRO PRIMO	Off Molfetta	Acrylonitrile and dichloroethane	Gas/Dissolver (ACN) Sinkers/Dissolver (DCE)	550 tonnes acrylonitrile and 1,000 tonnes dichloroethane
1991	SCAIENI	East of Sicily	Ammonium nitrate	Dissolver	3,057 tonnes
1996	ANIS ROSE	75 km south east of Olbia, Sardinia	Chrome ore	Sinker/Dissolver (DCE)	Unknown



1997	ONUR K	Off Sicily	Zinc and lead concentrates	Sinker/Dissolver (DCE)	Unknown
1998	DOGRUYOLLAR IV	48 km southeast of Cape Carbonara, Sardinia	Zinc and lead concentrates	Sinker/Dissolver (DCE)	2,020 tonnes
2000	HASAT		Flammable gas and liquid	Unknown	485 containers
2003	CAPE HORN (Current name: SAFA MARWA)	Leghorn	Methanol	Dissolver	14,000 tonnes
2004	PANAM SERENA	Porto Torres, Sardinia	Benzene	Evaporator	200 tonnes
2007	CHEMSTAR EAGLE (Current name: MTM WESTPORT)	Off Livorno	Styrene	Floater/Evaporator	No pollution reported

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Italy has some specialised equipment for the monitoring of marine spills of HNS.

The Italian Coast Guard Flight service has got two aircraft ATR 42 MP equipped with remote sensing sensors, like SLAR (Side Looking Airborne Radar), multi-spectral scanners (Sensytech ATM Enhanced), infrared cameras, and camcorders.

ITCG has got two aircraft Piaggio P166DL3 equipped with FLIR (Forward Looking InfraRed Radar), two spectral scanners (Sensytech 3505) and one iperspectral scanner (CASI 1500). By means of these devices it is possible to detect, in real time, wide marine areas polluted by various classes of noxious substances, in addition to hydrocarbons.

Moreover ITGC is equipped with two mobile laboratories for sea water chemical analysis.

The Ministry of Environment, under an outsourcing agreement, has at its disposal 40 vessels, of which seven vessels equipped with radar oil detection system (Seadarq), able to detect HNS behaving as hydrocarbons on the sea surface and 13 equipped with:

- multi-parametric probes
- water samplers (Niskin and Shoemaker bottles)
- sediment samplers
- biological samplers

The same ships will shortly be equipped with air samplers. Other analysis kits are stocked in warehouses ready to be used.

2.2. Response capability

Italy's capability for responding to marine incidents involving HNS is rather limited and relies on Harbour Fire

Brigades who are prepared to face this kind of emergency and have special boats; the assistance of the Harbour's Chemist (a service existing in all major Italian ports to advise the Harbour Master) is also used. All these operate under the coordination of the Harbour Master (Capitaneria di Porto). A private HNS antipollution vessel is contracted in case of an HNS marine incident.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

The Ministry of the Environment does not have any specialised vessel for dealing with marine incidents involving HNS, but the Harbour Fire Brigades have some boats fit for intervention in this field. In addition, the Contractor of the oil spill response service for the Ministry of the Environment is going to have some vessels classified by Registro Italiano Navale (RINA) as "HNS antipollution vessel".



2.2.2. Specialised response teams

Italy does not have specialised personnel, however the Fire Fighters Brigade has five specialised teams of CBNR able to work during HNS accidents and equipped with appropriate Personal Protective Equipment (PPE) (highest level of protection). They have personal decontamination equipment and tools for the containment of the products.

These special Fire Fighters Brigades are able to operate along the shoreline and on vessels. Fire Fighters Brigades have 12 centres, around the country, with helicopters that can transport the CBNR Teams on scene.

2.2.3. Scientific support

Scientific institutes which can provide scientific advice during HNS marine pollution are: Institute for Environmental Protection and Research (ISPRA) and the Italian National Institute of Health (ISS).

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

No. The CBNR Teams of Fire Fighters Brigade have special training courses (three steps 1°, 2° and 3°) organised by themselves. Due to the low number of HNS marine incidents no special exercises are organised in cooperation with the Italian Coast Guard.

3.2. Needs and suggestions for more specialised training programmes

Italy sees a need for specialised training programmes and exercises regarding HNS marine pollution response and could be appreciated a combined training for HNS and SAR responders.

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

Italy can provide the Italian Coast Guard flight service to other Member States in case of an HNS spill incident.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
No	Yes	Yes	Yes	Yes	Yes	Limited	Limited	Not specialised	Yes	Limited





Competent national authority responsible for marine pollution by HNS:
The State Environmental Service (SES), the Naval Forces Flotilla (NFF) and the Naval Forces Flotilla Coast Guard Service (CGS)

Policy coordinating authority: The State Environmental Service (SES) under the Ministry of Environmental Protection and Regional Development (MEPRD).

Operational authority: Naval Forces Flotilla (NFF) of the National Armed Forces (NAF).

Marine pollution response is coordinated by the Naval Forces Flotilla Coast Guard Service (CGS).

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

OPRC-HNS Protocol 2000 is ready for ratification. Due to financial constraints, ratification has been postponed.

Table 1

Year	Vessel	Location	Substance		
			Name	Chemical behaviour	Quantity spilled
2007	GOLDEN SKY (IMO No 8405373) *	900 m off Ventspils	Potassium chlorine (Muriate of potash)	Dissolver	24,983 tonnes
2009	Baltic Container Terminal	Riga Free Port	Acetone Cyanohydrin UN1541 * *	Gas/ evaporator	30 m ³

* During a successful salvage operation all the cargo was removed from the vessel, ship was refloated, granted a place of refuge in Ventspils Free port and towed to a shipyard.

* * Substance in a container reacted violently partly evaporating and partly reacting with surface water generating acetone and hydrogen cyanide.

1.2. National contingency plan

Yes. In 2010 the National Oil Spill Contingency Plan was amended with administrative procedures for dealing with marine pollution involving HNS, which is part of the existing NCP for oil pollution.

1.3. Risk assessment

Yes. "National Chemical Spill Contingency Plan Latvia", 2004, cooperation project Latvia/Flemish government (01/05053/DL).

1.4. Previous experience

Yes. See table 1.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Yes, but limited. Complete set of HNS surveillance, monitoring and evaluation devices available at NAF Chemical, Biological, Radiological, and Nuclear (CBRN) battalion. Latvia has the following specialised devices for surveillance, monitoring and evaluation of HNS releases in the marine environment:

- HNS forecasting models: e.g. Aloha Specialised forecasting models of NAF CBRN battalion;
- Devices for measuring toxic atmosphere: e.g. OrionPlus ex/ox/CO/H₂S/CO₂. Complete set of toxic atmosphere measuring devices of NAF CBRN battalion;



- Other measuring devices (e.g. oxygen meter, pH meter, flash point meter): e.g. Ex-Ox-Meter IIP Nonan. Complete set of environment safety measuring devices of NAF CBRN battalion;
- Sampling devices (including bottom sampling devices): standard sampling devices for water column and bottom sediments. Main set of sampling devices of State. Environmental Service, Institute of Aquatic Ecology, Laboratory of Latvian Environment, Geology and Meteorology Centre

2.2. Response capability

Latvia has a very limited capability for responding to marine incidents involving HNS.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Latvia has a complete set of personal protective equipment of NAF CBRN battalion only for HNS surveillance,

monitoring and evaluation tasks, but does not have any specialised vessels for marine incidents involving HNS.

2.2.2. Specialised response teams

Latvia does not have a specialised response team for marine incidents involving HNS. Specialised personnel available only for HNS pollution on land.

2.2.3. Scientific support

Latvia does not have a specialised body which provides scientific advice on marine incidents involving HNS. However experts may be invited from military, scientific and industry communities.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

Latvia has no regular exercises and training programmes for vessels, aircrafts and personnel involved in HNS pollution response.

3.2. Needs and suggestions for more specialised training programmes

Latvia sees a need for specialised training programmes and exercises regarding HNS marine pollution response. Practical training programme for NFF and LCGS personnel, similar to IMO model training course level I, II and III should be applied.

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

Latvia can provide experts on request from military, scientific and industry communities, to other Member States in case of an HNS spill incident at sea.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
No	Yes	Yes	Yes	Limited	Very limited	Yes	No	No	Limited	No



Competent national authority responsible for marine pollution by HNS: *The Navy of the Lithuanian Armed Forces*

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Lithuania has not ratified the OPRC-HNS Protocol 2000. Due to the on-going reorganisation of the current Search and Rescue (SAR) and pollution response system, there is some uncertainty about the date of ratifying the OPRC-HNS Protocol 2000. Nevertheless, the Government of the Republic of Lithuania is making all the necessary preparations and is considering ratifying the OPRC-HNS Protocol 2000 in the near future

1.2. National contingency plan

Lithuania does not specifically cover response to HNS in their national contingency plan.

1.3. Risk assessment

Lithuania does not specifically cover response to HNS in their national contingency plan.

1.4. Previous experience

Lithuania has not been involved in any marine incidents with HNS.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Lithuania does not have any specialised equipment for monitoring of marine spills of HNS.

2.2. Response capability

Lithuania's capability for responding to marine incidents involving HNS is very limited and mainly relies on the same resources as for oil pollution response.

There are no special storage devices or storage arrangements in place for recovered HNS. Floating cranes and barges may be used for recovery and as temporary storage of packaged goods.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Lithuania does not have any safety equipment, vessels and special storage devices for dealing with marine incidents involving HNS.

2.2.2. Specialised response teams

Lithuania does not have a specialised response team for marine incidents involving HNS.

2.2.3. Scientific support

Lithuania does not have a specialised body which provides scientific advice on marine incidents involving HNS. In case of chemical spills, the Marine Research Department of The Environmental Protection Agency is contacted for expert advice.



3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

Lithuania has no regular exercises and training programmes for vessels, aircrafts and personnel involved in HNS pollution response.

3.2. Needs and suggestions for more specialised training programmes

Lithuania sees a need for specialised training programmes and exercises and theoretical training for MRCC duty officers regarding HNS marine pollution response.

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

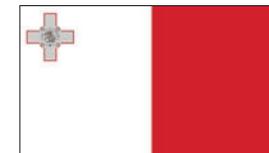
Lithuania cannot provide assistance to other Member States in case of an HNS spill incident.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
No	No	No	No	Very limited	No	No	No	No	Yes, limited	No



Competent national authority responsible for marine pollution by HNS:
The Authority for Transport in Malta (TM)

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Malta has ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

The present NCP was re-written in 2009 and now covers response to HNS pollution.

1.3. Risk assessment

A risk assessment was carried out in 2008/2009 as part of the studies carried out to before the revision of the National Contingency plan. This risk assessment can be found in part 1 of the aforementioned plan.

1.4. Previous experience

Malta has been involved in some marine incidents with HNS. See table 1.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Malta has the following specialised devices for surveillance, monitoring and evaluation of HNS releases in the marine environment:

- Aerial surveillance: generic aerial surveillance (not specialised for HNS);
- Vessel surveillance: generic vessel surveillance (not specialised for HNS);

- Devices for measuring toxic atmosphere: 4 x Ibird MX6 Gas Detection Meters, 3 x Drager X-am5000 Chemical Meters, 2 x MSA Gas detectors and peripherals;
- Other measuring devices (e.g. oxygen meter, pH meter, flash point meter): radiation monitor, toxic meter;
- Sampling devices (including bottom sampling devices): 1 x MSA Toximeter 2 and peripheral;
- Other devices: decontamination materials and accompanying equipment, PPE specifically for HNS (includes boots, suits, gloves, masks, breather apparatus, etc.); consumables including wipes, disposable gloves and tape; accessories (including knives, night vision etc.); storage including drums and bins.

Table 1

Year	Vessel	Location	Substance		
			Name	Chemical behaviour	Quantity spilled
1988	OCEAN SPIRIT	Off Gozo Island	Lead concentrate	Sinker	2,850 tonnes
2002	CAMADAN	-	Phosphate granules (solid)	Unknown	2,900 tonnes
2006	IRAN ILAM (Current name: SEPTAM)	Marsaxlokk	Explosive substances and objects and radioactive objects	Unknown	700 tonnes



2.2. Response capability

Malta's capability for responding to marine incidents involving HNS is very limited.

The Civil Protection Department has equipment specifically designed for combating HNS and protective clothing to carry out the task. For specific equipment for response to spills of HNS, see table 2.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

The Civil Protection Department has equipment specifically designed for combating HNS and protective clothing to carry out the task. Although, Malta does not have any specialised vessels for dealing with marine incidents involving HNS.

2.2.2. Specialised response teams

The Civil Protection Department has HNS response equipment and individuals from the Civil Protection Department have been trained to utilise the available equipment.

2.2.3. Scientific support

Malta does not have a specialised body which provides scientific advice on marine incidents involving HNS. The University of Malta and the Malta Environment and Planning Authority (MEPA) can provide scientific support on marine pollution in general.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

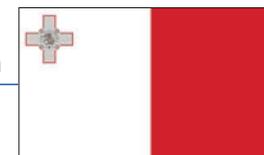
Personnel from the Civil Protection Department receive regular training in HNS pollution response around once a year.

3.2. Needs and suggestions for more specialised training programmes

A workshop could be organised by EMSA to include training on practical aspects.

Table 2

Vessels and special storage devices/storing arrangements in place for recovered HNS				
Equipment	Quantity	Characteristics	Location	Contact point
Drums	Civil Protection Department	Different colours	CPD- Kordin	CPD-Marine Unit
Various HNS Equipment	Civil Protection Department	-	CPD-Kordin	CPD-Marine Unit



4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

5. SUMMARY

See table 3.

Malta cannot provide assistance to other Member States in case of an HNS spill incident.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
Yes	Yes	Yes	Yes	Yes	Limited	Yes, limited	No	Limited	Limited	Yes





Competent national authority responsible for marine pollution by HNS: *The Director of the Netherlands Coastguard*

The Director of the Netherlands Coastguard is assisted by the Dutch Directorate-General for Public Works and Water Management (Rijkswaterstaat RWS) North Sea, the organisation that also executes the marine pollution response plan. A policy-making team is chaired by the director of RWS North Sea.

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

The Netherlands has prepared a Maritime Emergency Response Service. In this service, in addition to search and rescue and emergency towing, response to HNS is covered. Because of merging of RWS Noordzee with RWS Zeeland, the area is enlarged. In line of responsibilities, the

Director of RWS NoordZeeland is the policy decider for the NL Coastguard.

1.1. OPRC-HNS Protocol 2000

The Netherlands has ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

The Netherlands does not specifically cover response to HNS in their national contingency plan. A specific national contingency plan for HNS incidents is under construction and will then be part of the existing national contingency plan for oil. The National Contingency Plan is currently under review and is scheduled to be ready in 2012.

1.3. Risk assessment

The Netherlands has not made any risk assessment specifically aimed at marine transport of HNS. The Netherlands trusts more information will be taken from the Bonn Agreement BE-AWARE project.

1.4. Previous experience

The Netherlands has been involved in marine incidents with HNS. See table 1.

Table 1

Year	Vessel	Location	Substance		
			Name	Chemical behaviour	Quantity spilled
1988	ANNA BROERE	North Sea	Acrylonitrile and Odetyl benzene	Dissolver	547 tonnes of Acrylonitrile and 500 tonnes of Odetyl benzene
1992	ARIEL	North Sea	White spirit	Unknown	45 drums
1992	NORDFRAKT	North Sea, 27 nm off Noordwijk	Lead sulphur	Sinker	2,352 tonnes
1994	SHERBO	English Channel	Apron +50DS	Dissolver	168,000 sachets



1998	APUS	North Sea	Urea-formaldehyde and kerosene	Unknown	2,100 boxes
1998	BAN-ANN	North Sea	Sulphur phosphine Detia EX-B	Dissolver	Unknown
1998	DART 2	North Sea	Methane sulphon acid	Unknown	Loss of fifteen 200 litre drums
1998	EUROPEAN TIDEWAY	-	Alkyl phenol ether phosphate (detergent agent)	Unknown	Seven 200 litre drums
2003	ANDINET	North Sea	Arsenic pentoxide	Dissolver	3 containers with drums and a number of loose drums
2007	IMPULS	Maasbracht	Sulphuric acid	Dissolver	-
2008	RUBINO	Off Zouteland	Acetone and acetylene	Dissolver	-
2008	STOLT INNOVATION	Rotterdam	Methylene diphenyl diisocyanate (MDI)	Unknown	-
2009	SICHEM ANNE (Current name: PV OIL VENUS)	Dordrecht	Dangerous goods	Unknown	No pollution reported

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

The Netherlands has some specialised equipment for the monitoring of marine spills of HNS. There are two remote sensing aircraft available and there are vessels for monitoring the sea area, taking water samples, and locating lost packaged goods.

Modelling exists through the RWS Centre for Water Management in Lelystad. All national institutes of interest are organised in a web based group of experts, called BOT-mi (Policy Advising Team for Environmental Incidents).

This includes gas cloud modelling, health risks and military experts. The Netherlands also has sampling devices, devices for measuring toxic atmosphere, provided by the Industry, RWV and NoordZeeland.

2.2. Response capability

The Netherlands' capability for responding to marine incidents involving HNS is rather limited and mainly relies on the same resources as for oil pollution response. However, there is no generic strategy for deployment of oil pollution equipment. This should be discussed on a case by case basis.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

The Netherlands' capability for responding to marine incidents involving HNS is rather limited and mainly relies on contracting commercial companies e.g. salvors. Research is required to find out in which cases oil response equipment can be used.

The Netherlands does not have any specialised vessels for dealing with marine incidents involving HNS. Some Navy vessels have gas tight citadels and can go into hazardous areas for measuring the air.



2.2.2. Specialised response teams

The Netherlands has a specialised response team for marine incidents involving HNS (industry).

2.2.3. Scientific support

The Dienst Centraal Milieu Rijnmond (DCMR) in Schiedam provides advice on human risk issues. The RWS Centre for Water Management provides advice on ecological aspects and possible response options. The National Institute for Applied Science and others may also be contracted in case of an incident to provide support or conduct long term effect studies.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

The Nautical College Willem Barentz offers an annual one week training course on HNS, based on an EU programme.

3.2. Needs and suggestions for more specialised training programmes

The Netherlands would like to see regular updates, refresher courses and full education and training for new people should be provided. CEDRE and Braemar Howells can provide courses same as Willem Barentz or Falck4.

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

The Netherlands can provide the following assistance to other Member States in case of an HNS spill incident:

- Specialised equipment/vessels with trained personnel: Industry;
- Experts in HNS: Industry;
- Aerial surveillance.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
Yes	No	No	Yes	Yes	Limited	Limited	Very limited	Yes	Yes	Yes





Competent national authority responsible for marine pollution by HNS:
The Norwegian Coastal Administration (NCA)

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Norway has ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

Norway covers response to HNS in its national contingency plan. The plan is part of the existing NCP. The plan's main focus is on oil pollution. Norway is not considering major change in its current policy regarding HNS marine pollution. Currently, additional equipment is being acquired and HNS training/exercise is being increased.

1.3. Risk assessment

A risk assessment for the transport of HNS in Norwegian coastal areas was made in 2004, and recommendations have been made based on specific relevant scenarios.

1.4. Previous experience

Norway has not been involved in any major marine incidents involving HNS.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Norway has some specialised equipment for monitoring marine spills of HNS. Mainly equipment transported from fire brigades on land. There is an aircraft, specialised for oil spill detection, but no aircraft or vessel dedicated to handling HNS in a specific way. Norway also has sampling devices and devices for measuring toxic atmosphere.

2.2. Response capability

Norway's capability for responding to marine incidents involving HNS is very limited and mainly relies on the same resources as for oil pollution response. The capability is in

place for handling HNS pollution with similar properties as oil spills.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Some equipment exists, especially in the largest fire brigades. Two fire brigades in Norway are dedicated to handle HNS response at sea. In 2012 they will invest in new equipment and protective suits for handling HNS.

Norway does not have any specialised vessels for dealing with marine incidents involving HNS.

2.2.2. Specialised response teams

Two fire brigades are dedicated to deal with HNS at sea. They started training in 2012, and will continue to train regularly to handle incidents including HNS.



2.2.3. Scientific support

Norway does not have a specialised body which provides scientific advice on marine incidents involving HNS.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

Norway started the training of two dedicated fire brigades in 2012. At least three exercises will be done each year for the two dedicated fire brigades. There will be training which involves vessels. No specific programme for training is established.

3.2. Needs and suggestions for more specialised training programmes

Norway sees a need for specialised training programmes and exercises regarding HNS marine pollution response, these would be useful.

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

Norway cannot provide assistance to other Member States in case of an HNS spill incident.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
Yes	Yes	Yes	No	Yes	Very limited	Yes	No	Yes	No	Yes



Competent national authority responsible for marine pollution by HNS:

The Director of the Maritime Office (depending on the area, this can be a director from Gdynia, Slupsk or Szczecin offices)

In this particular task the Director of the Maritime Office is assisted by the Maritime Search and Rescue Service, the organisation which prepares and also executes the contingency plan for responding to marine pollution.

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

Poland aims to establish a legal framework for the Maritime Emergency Response Team (so far it is based on the operational agreement between the SAR Service and the Commander of the State Fire Service). At present the National System for Detection and Warning of Hazardous Contamination (SWS) is under preparation. Maritime Search and Rescue Service and maritime administration information centres are included in the SWS.

1.1. OPRC-HNS Protocol 2000

Poland has ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

The national contingency plan and the port/facility contingency plans for big harbours cover response to HNS.

1.3. Risk assessment

Poland and all other Baltic countries have completed the project named BRISK related to the sub-regional risk of spill of oil and hazardous substances in the Baltic Sea. BRISK was co-financed by the European Union within the Baltic Sea Region Programme (BSR) 2007-2013. Its total budget amounted to around EUR 3.3 million. The project area covered all transnational maritime areas in the Baltic, divided into 6 sub-regions.

As part of the local contingency planning a threat identification analysis has been made for particular chemicals, including the type of chemical and probable quantity to be involved. This covers response plans for big Polish harbours, such as Gdansk, Gdynia, Szczecin and Swinoujscie.

Additionally, there is a list of HNS cargo handling terminals which are obliged to have their own preparedness and response systems. For areas with heavy traffic, the vessels traffic monitoring systems (VTMS) are established where the Dangerous Goods Manifest is obligatory as well as reporting procedures related to IMO Res. A.851(20).

1.4. Previous experience

Poland has not been involved in any marine incidents with HNS.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Poland has the following specialised equipment for the monitoring of marine spills of HNS:

- Aerial surveillance: without remote HNS sensing equipment;
- Vessel surveillance: stationary gas detection system for oxygen, hydrogen sulphide, carbon monoxide, ammonia, explosives, photoionization detector (PID);
- HNS forecasting models: only for floaters (there is no 3-D model);
- Other measuring devices: pH meter, dose rate meter, conductivity meter;
- Sampling devices (including bottom sampling devices): portable tube dragger system.

The monitoring is an integral part of the response action, appointed in the national contingency plan. Sampling and chemical analyses should be done both by responders for operational purposes and the State Monitoring System for the consequences assessment purpose. Air and water surveillance systems are in place similarly to oil incident surveillance systems, but their presence has to be preceded by the safety assessment.

The monitoring capability of the National System for Detection and Warning of Hazardous Contamination (SWS) is still unknown as the system itself is under development.

2.2. Response capability

Poland's Navy HNS teams as well as National State Fire System teams are equipped with full Personal Protective Equipment (PPE). A multipurpose response vessel is equipped with escape apparatus and breathing apparatus. For specific equipment for response to spills of HNS, see table 2.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Poland does not have any specialised vessels for dealing with marine incidents involving HNS. A multipurpose response vessel is equipped with escape apparatus and breathing apparatus. Poland's main oil response vessel has an installation for detecting some substances but is not gas-tight. Some Navy vessels have gas-tight citadels and are prepared for quick escape from a hazardous atmosphere, but as they have different responsibilities the possibilities for using them have not been explored. However, the Navy is still appointed in the national contingency plan as a cooperating institution.

2.2.2. Specialised response teams

Poland does not have a specialised response team for marine incidents involving HNS. However, Navy HNS teams as well as National State Fire System teams are equipped with full Personal Protective Equipment (PPE).

In case of an incident, there would be direct operational cooperation with the chemical response team from the Provincial State Fire Service units of the cities of Gdansk, Gdynia and Szczecin. This has been agreed between the SAR Service and the Commander of the State Fire Service and regional SFS commanders of Gdansk, Olsztyn and Szczecin.

Within the new SWS system, in special circumstances some Polish Navy HNS teams could be used.

2.2.3. Scientific support

Poland does not have a specialised body which provides scientific advice on marine incidents involving HNS. In the frame of the National Contingency Plan there is an advisory body. A Research Group is nominated in advance by the competent minister, and can be activated within the plan. The chemical (HNS) expert is a member of this team. The members of the SWS may also respond to requests for advice.

Table 2

Vessels and special storage devices/storing arrangements in place for recovered HNS				
Equipment	Quantity	Characteristics	Location	Contact point
KAPITAN POINC	1	Multipurpose vessel (not gas tight), stationary gas detection system	Gdynia	Maritime Search and Rescue Service
Portable containerised HNS tank	1	24 m ³ , 70 hazardous substances	Gdynia	Maritime Search and Rescue Service
Overpacks	8	Different types of overdrums	Gdynia	Maritime Search and Rescue Service



Poland has scientific support in the following areas:

- Human health and safety: the SWS and the Research Group;
- Environmental toxicology: the SWS and the Research Group;
- Salvage/response: limited extent;
- Other: we plan to use an international assistance within the Helsinki Convention as well as the MAR-ICE Network (EMSA).

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

Poland does not have special training courses available in this field. In the framework of the new SWS system some exercise were provided. The last national table top exercise was conducted in November 2010 (SWS exercises cover only communication and reporting procedures). Since 2009, on yearly basis Germany and Poland exercise different HNS scenarios, parallel to the oil combating

exercises executed within the frame of the Polish – German operational agreement.

3.2. Needs and suggestions for more specialised training programmes

Poland sees a need for more specialised training programmes and exercises regarding HNS marine pollution response as there are no indicated requirements for HNS handling operators and managers to have dedicated courses. In addition, learning programmes at university studies do not cover interactions between HNS and marine environment.

Poland has the following suggestions for participation in more HNS-dedicated training programmes:

- Train the trainer courses;
- Introductory courses on the response to HNS both on operational and manager levels. A good one is the Model Course offered by IMO;
- E-learning.

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

Poland cannot provide assistance to other Member States in case of an HNS spill incident.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
Yes	Yes	No	No	Limited	Limited	Limited	Limited	Limited	Limited	Yes





Competent national authority responsible for marine pollution by HNS:
The Directorate-General of the Maritime Authority (Direcção-Geral da Autoridade Marítima, DGAM), under the auspices of the National Maritime Authority and the Ministry of Defence

The Direcção-Geral da Autoridade Marítima carries out, at national level, the coordination of the means of responding to marine pollution at sea and ashore.

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Portugal has ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

Portugal covers response to HNS in their national contingency plan.

The Portuguese Contingency Plan for combating pollution by oil and other harmful substances at sea and on coastline,

called “Plano Mar Limpo” (Clean Sea Plan), includes Regional Emergency Plans and Local Emergency Plans.

Portugal is trying to get more information in order to improve its preparation to respond in case of an HNS accident.

1.3. Risk assessment

Portugal has not made any risk assessment specifically aimed at marine transport of HNS.

1.4. Previous experience

Portugal has been involved in some minor marine incidents with HNS. See table 1.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Portugal does not have any specialised equipment for the monitoring of marine spills of HNS.

2.2. Response capability

Portugal’s capability for responding to marine incidents involving HNS is very limited and mainly relies on the same resources as for oil pollution response.

Table 1

Year	Vessel	Location	Substance		
			Name	Chemical behaviour	Quantity spilled
1978	ALCHIMIST EDEN	Ericeira	Undefined HNS substances	Unknown	1,600 tonnes
1997	MSC CLARA	Off Azores, Atlantic	Undefined HNS substances (flammable, combusive, poisonous, radioactive and corrosive products, among others)	Unknown	74 containers, some of them with undefined HNS substances



2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Portugal does not have specialised safety equipment, vessels or special storage devices for dealing with marine incidents involving HNS.

2.2.2. Specialised response teams

Portugal does not have a specialised response team for marine incidents involving HNS.

2.2.3. Scientific support

Portugal does not have a specialised body which provides scientific advice on marine incidents involving HNS.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

Portugal has no regular exercises and training programmes for vessels, aircrafts and personnel involved in HNS pollution response.

3.2. Needs and suggestions for more specialised training programmes

No information was provided.

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

Portugal cannot provide assistance to other Member States in case of an HNS spill incident.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
Yes	Yes	No	Yes, minor	No	Very limited	No	No	No	No	No



Competent national authority responsible for marine pollution by HNS:
The Ministry of Environment and Forestry is responsible for the coordination of activities connected with national response functions, and the elaboration and updating of the National Contingency Plan

The Ministry of Transport and Infrastructure, through the Romanian Naval Authority (RNA), has the lead role of the Maritime Division for at-sea spill response operations. It is the competent authority responsible for at-sea spill response operations and for the safety of navigation.

The Ministry of Administration and Interior is the competent authority responsible for the land response operations.

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Romania has not ratified the OPRC-HNS Protocol 2000, but has initiated the necessary internal procedures in order to achieve this.

1.2. National contingency plan

In 2006, Romania approved a common national contingency plan for both oil and HNS by the Governmental Decision 893/2006.

1.3. Risk assessment

The risk assessment specifically aimed at marine transport of HNS is a part of the PSO Pre-Accession Programme (PPA02/RM/7/7).

According to the National Contingency Plan, HNS cargo operators must have their own preparedness and response local plans. As per national legislation, all masters of vessels arriving in a Romanian maritime port have to send a notification to a vessel traffic system (VTS), which includes details about dangerous or polluting goods carried on board. All vessels that have dangerous goods on board when entering Romanian maritime ports are obliged to be assisted by an additional tug for manoeuvring.

1.4. Previous experience

Romania has not been involved in any marine incidents with HNS.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

In Romania, the monitoring of marine incidents involving HNS is assured by some companies which are part of the Maritime Division. These companies have specialised teams and equipments for air and water monitoring. Visual monitoring of floating coloured substances and for locating floating packaged goods can be carried out from vessels.

Samples can be taken at sea and brought for analysis to the National Institute for Marine Research and Development "Grigore Antipa", the Rompetrol Quality Control or to the Environmental Protection Agency. The Rompetrol Quality Control and the Environmental Protection Agency also have mobile devices for air monitoring and for noise testing.

Romania has also devices for measuring toxic atmosphere, pH meter and oxygen meters as well as sampling devices (including bottom sampling devices).



2.2. Response capability

Romania's capability for responding to marine incidents involving HNS is very limited and relies on the same resources as for oil pollution response. As a conclusion of the Matra project PPA02/RM, when it is suitable and safe to do so, existing oil spill equipment is available to support a marine HNS spill.

According to technical specification, the port oil booms can be used for some HNS substances: heptane, mineral turpentine, ethyl gas alcohol, toluene, xylene, styrene.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Romania does not have specialised safety equipment for HNS response. Boom towing vessels cannot be used in HNS response which involves toxic gas emissions because they are not gas tight and the personnel do not have protective equipment.

2.2.2. Specialised response teams

Romania does not have a specialised response team for marine incidents involving HNS.

2.2.3. Scientific support

Some companies (private or state owned), as part of the Maritime Division, can provide scientific advice on marine incidents involving HNS.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

As a part of the Matra PPA02/RM project, an introductory course on the National Contingency Plan was organised for the institutions with responsibilities in the National Plan application. Moreover, in 2004 and as a part of the same project, a complex exercise was organised to test the structure of the Oil and HNS Spill Emergency Response Plan. In November 2007 the exercise "Ovidius 2007", which

included a HNS scenario, was organised by the Constanta County Inspectorate for Emergency Situations.

3.2. Needs and suggestions for more specialised training programmes

Yes, there is a need for more specialised training programmes and exercises regarding HNS marine pollution response. Any kind of training is a good opportunity to increase the level of knowledge.

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

Romania cannot provide assistance to other Member States in case of an HNS spill incident.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
No	Yes	Yes	No	Yes	Very limited	No	Very limited	No	Yes	Yes



Competent national authority responsible for marine pollution by HNS:

The Environmental Agency (EA) under the Ministry Agriculture and Environment and the Administration of the Republic of Slovenia for Civil Protection and Disaster Relief (ACPDR) under the Ministry of Defence (MD)

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Slovenia has ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

Slovenia does not specifically cover response to HNS in their national contingency plan. The new National Oil and Chemical Spill Contingency Plan for Slovenia (NOCSCP) will cover also response to incidents with HNS in the marine environment, but has not yet been implemented.

The NCP was revised in July 2011.

1.3. Risk assessment

A risk assessment aimed at marine transport of HNS was conducted in 2005 as a part of the development of a new National Oil and Chemical Spill Contingency Plan for

Slovenia (NOCSCP). The risk assessment comprised hazard identification, hazard analysis and sensitivity analysis.

The risk assessment was revised in March 2010.

1.4. Previous experience

Slovenia has not been involved in any marine incidents involving HNS.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Slovenia does not have any specialised equipment or vessel for monitoring of marine spills of HNS.

2.2. Response capability

Slovenia's capability for responding to marine incidents involving HNS is very limited and relies on the same resources as for oil pollution response. As a conclusion of

the Matra project PPA02/RM, when it is suitable and safe to do so, existing oil spill equipment is available to support a marine HNS spill.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Slovenia has some specialised safety equipment which is stored in the fire brigades, but this is not dedicated to sea and shore cleaning operations. Slovenia does not have any specialised vessels or special storage devices for dealing with incidents involving HNS.

2.2.2. Specialised response teams

Slovenia has a response team for incidents involving HNS in the marine environment which is employed in fire brigades.



2.2.3. Scientific support

Slovenia does not have a specialised body which provides scientific advice on marine incidents involving HNS based on a regular contract.

Expert support is available at the Administration of the Republic of Slovenia for Civil Protection and Disaster Relief (ACPDR). Non-formal cooperation is established with the Faculty of Maritime Studies and Transport (University of Ljubljana), which has expert and simulation capacities (Transas – PISCES simulator) for incidents involving HNS in the marine environment.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

Slovenia has no regular exercises and training programmes for vessels, aircrafts and personnel involved in HNS pollution response.

3.2. Needs and suggestions for more specialised training programmes

Slovenia sees a need for specialised training programmes and exercises regarding HNS marine pollution response.

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

Slovenia cannot provide assistance to other Member States in case of an HNS spill incident.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
Yes	No	Yes	No	No	Very limited	Limited	No	Limited	Yes	No



Competent national authority responsible for marine pollution by HNS:
The Directorate General of the Merchant Marine (DGMM), part of the Ministry of Transport and Public Works

On-site coordination and response are provided by the Sub-director General for Maritime Safety and Pollution Control under the Directorate General of the Merchant Marine through a network of Maritime Rescue Coordination Centres (MRCC). The MRCC at Madrid provides central control and establishes links with foreign coordination centres.

Spain is divided into 12 coastal Autonomous Regions with environmental competences. If marine pollution reaches the shore, they are the main responders. In the event of a serious spill, when more than one Autonomous Region is affected, the on-site coordination is jointly performed by the Ministry responsible in the Autonomous Region and the Government Delegate responsible for the area.

The Spanish Marine Safety Agency (SASEMAR), under the overall coordination of the DGMM, provides maritime SAR, marine pollution response at sea, and maritime traffic control services. Response to pollution at sea is provided by SASEMAR by coordination of air and sea resources and any other means from different administrations. SASEMAR has 22 regional MRCC centres around the coast.

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

Spain is currently working in order to improve and progress in preparedness and response to HNS pollution incidents.

1.1. OPRC-HNS Protocol 2000

Spain has ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

Spain does not specifically cover response to HNS in its National Contingency Plan.

Spain is currently working in order to improve and progress in preparedness and response to HNS pollution incidents.

1.3. Risk assessment

Spain has not made any risk assessment specifically aimed at marine transport of HNS.

1.4. Previous experience

Spain has been involved in some marine incidents with HNS. See table 1.

Table 1

Year	Vessel	Location	Substance		
			Name	Chemical behaviour	Quantity spilled
1987	CASON	Off Finisterre	A number of hazardous substances, including diphenyl methane diisocyanate, ortho-cresol, aniline, and sodium	Unknown	1,100 tonnes
1999	JESSIE MAERSK (Current name: MAHARSHI KRISHNATREYA)	Off the east side of Gibraltar	Ammonia (gas release)	Gas/evaporator	Unknown



2001	BALU	Bay of Biscay	Sulphuric acid	Dissolver	8,000 tonnes
2007	OSTEDIJK	NW SPAIN 29.55 nm northeast of Cabo Vilán, Galicia	Thermal reaction of the cargo on board NPK 15:15:15	Sinker/dissolver	6,012 tonnes (No quantity spilled)
2007	TIGER	Melilla port	DRI	Sinker	3,700 tonnes (No quantity spilled)
2008	MAERSK NEWPORT	Port of Algeciras	Oxygen acetylene	Gas/evaporator	–
2012	HALDOZ	Port of Tarragona	Styrene spill during loading operations	Floater, Gas/evaporator	–

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Spain does not have any specialised equipment for the monitoring of marine spills of HNS. However, it has aerial and vessel surveillance available.

2.2. Response capability

Spain's capability for responding to marine incidents involving HNS at sea is rather limited and mainly relies on the same resources as for oil pollution response and on special occasions on resources from private companies.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Spain has two new multipurpose vessels, which have pressurised bridges and gas detector systems for HNS.

2.2.2. Specialised response teams

Spain does not have a specialised response team for marine incidents involving HNS but it has four multipurpose vessels and seven tug vessels, which have pressurised bridges and gas detector systems for HNS.

2.2.3. Scientific support

The DGMM signed in 2006 a voluntary agreement with the Spanish Chemical Industry Federation (FEIQUE) and established the Spanish Maritime ICE Scheme Centre

Table 2

Vessels and special storage devices/storing arrangements in place for recovered HNS				
Equipment	Quantity	Characteristics	Location	Contact point
Multipurpose vessels (sister ships): CLARA CAMPOAMOR and DON INDA	2	Bollard pull = 234 MT; which have pressurised bridges and gas detector systems for HNS. 1,750 m ³ each one	Valencia (1) Corcubión (1)	Directorate General of the Merchant Marine (DGMM)
Multipurpose vessels (sister ships): LUZ DE MAR and MIGUEL DE CERVANTES	2	Bollard pull = 128 MT which have pressurised bridges and gas detector systems for HNS, 293 m ³ each one.	Algeciras (1) S.C. de Tenerife (1)	Directorate General of the Merchant Marine (DGMM)



Multipurpose vessels: PUNTA MAYOR and PUNTA SALINAS	2	Bollard pull of 81 MT; Bollard pull of 98 MT; 240 m ³ of storage capacity each one.	Castellón (1) S.C. de Tenerife (1)	Directorate General of the Merchant Marine (DGMM)
MARIA DE MAEZTU MARIA PITA MARIA ZAMBRANO MARTA MATA SAR GAVIA SAR MASTELERO SAR MESANA	7	Bollard pull = 60 MT which have pressurised bridges and gas detector systems for HNS.	Bilbao Cadiz Marín Palma de Mallorca Motril A coruña Valencia	Directorate General of the Merchant Marine (DGMM)

CEREMMP in Madrid MRCC. CEREMMP provides remote product information on chemicals, and in case of emergencies CEREMPP can also request further assistance from a participating company, depending on the product(s) involved. Madrid MRCC is also the designated centre to establish the link with MAR-ICE.

Spain has scientific support from industry expertise in human and health safety, environmental toxicology and salvage and response area.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

Spain has communication exercises and training programmes undertaken periodically.

3.2. Needs and suggestions for more specialised training programmes

Training programmes related to the operational first response for HNS incidents.

4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

Spain can provide specialised equipment/vessels and aerial surveillance to other Member States in case of an HNS spill incident.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
Yes	No	No	Yes	Limited	Limited	No	Yes	No	Yes	Yes





Competent national authority responsible for marine pollution by HNS:
The Swedish Coast Guard

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

Sweden has ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

Sweden covers response to HNS in their national contingency plan.

1.3. Risk assessment

Sweden has made a risk assessment including marine transport of HNS. The assessment will be updated on a yearly basis. The BRISK-project was completed, but the risk assessment focused on oil and did not entirely cover HNS for all of the Baltic Sea (www.brisk.helcom.fi).

1.4. Previous experience

Sweden has been involved in marine incidents involving HNS. See table 1.

2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

Sweden has specialised equipment for monitoring of marine spills of HNS:

- Aerial surveillance;
- Devices for measuring toxic atmosphere: one vessel is equipped with devices for measuring gases outside the ship;
- Other measuring devices: one vessel is equipped with devices for measuring gases outside the ship;

Table 1

Year	Vessel	Location	Substance		
			Name	Chemical behaviour	Quantity spilled
2000	MARTINA	Off Hoganas	Hydrochloric acid	Unknown	600 tonnes
2003	FU SHAN HAI *	Off Bornholm Island, Denmark	Potash	Dissolver	66,000 tonnes
2007	ANNABELLA	Near Gotland Island	Butylene	Gas/evaporator	Unknown
2008	CRYSTAL TOPAZ	Malmö	Ethanol	Unknown	1,000 tonnes
2010	LINDA	Between Oland and northern Gotland	Inflammable liquid	Unknown	3 containers (19 tonnes)

* The accident happened in Denmark's waters, but Sweden was involved in the response.



- Sampling devices (including bottom sampling devices): Sampling equipment for oil samples can be used in some HNS incidents.

2.2. Response capability

Sweden's capability for responding to marine incidents involving HNS is based on a number of emergency responders, specifically trained to deal with marine pollution from HNS. For specific equipment for response to spills of HNS, see table 2.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

Sweden has specialised safety equipment for HNS response (protective suits, breathing apparatus, and decontamination stations on board our response vessels).

Several of the oil response vessels have an overpressure system and a special gas filter for use in hazardous atmosphere (hydrocarbons). The vessel KBV 003 is classified as a Chemical Recovery vessel.

2.2.2. Specialised response teams

The Swedish Coast Guard (SCG) has specialised response teams for marine incidents involving HNS, consisting of 70 emergency responders trained for water diving, fire fighting and chemical spill response.

The SCG also has a contract with municipal fire brigades along the coastline, each of which can provide a team of fire fighters specially trained for HNS response at sea.

2.2.3. Scientific support

Sweden does not have a specialised body which provides scientific advice on marine incidents involving HNS. The Swedish Chemical Agency can provide some assistance during office hours. Through the MAR-ICE network additional information is available. Scientific support can be provided in human and health safety, environmental toxicology and salvage/response area.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

Sweden has regular exercises and training programmes for vessels, aircrafts and personnel involved in HNS pollution response: Annual training is provided for emergency responders.

3.2. Needs and suggestions for more specialised training programmes

The Swedish Coast Guard has sufficient training at the time. Additional exercises are always welcomed but have to be balanced with the day-to-day work.

HNS training at the same level as large oil spill exercises is something to aim for. International training of MIRG (Marine Incident Response Group) is also of interest to the SCG.

Table 2

Vessels and special storage devices/storing arrangements in place for recovered HNS				
Equipment	Quantity	Characteristics	Location	Contact point
Vessel KBV 003	1	Stainless steel tanks with 250 m ³ of storage capacity	Southern Baltic Sea	NCC Swedish Coast Guard



4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

Sweden could offer assistance to other Member States in case of an HNS spill incident, using KBV 003. Sweden can also provide a vessel and aerial surveillance.

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
Yes	Yes	Yes	Yes	Specialised	Yes	Yes	Yes	Yes	No	Yes





Competent national authority responsible for marine pollution by HNS:
The UK Maritime and Coastguard Agency (MCA)

1. POLICY AND PREPAREDNESS FOR HNS MARINE POLLUTION

1.1. OPRC-HNS Protocol 2000

The United Kingdom has not ratified the OPRC-HNS Protocol 2000.

1.2. National contingency plan

The United Kingdom details the response to HNS in their national contingency plan. The National Contingency Plan for Marine Pollution from Shipping and Offshore Installations covers both oil and HNS.

1.3. Risk assessment

The United Kingdom has carried out a substantive risk assessment with respect to the marine transport of HNS in the UK Pollution Control Zone. That work presents quantitative estimates of the risks of spills of bulk chemicals from chemical tankers in UK waters. The estimates show the geographical distribution of the risk broken down by accident type, spill size, pollution hazard and behaviour when released. Estimates are also provided on the geographical distribution of gas carrier accidents in UK waters, broken down by accident type.

MCA Research Project report RP 593 - UK Risk Assessment for Hazardous and Noxious Substances, June 2009
<http://www.dft.gov.uk/mca>.

MCA Research Project report RP 447 – Safetec UK, Chemical Spill Risk Assessment, May 2001.

1.4. Previous experience

The United Kingdom has been involved in dealing with a number of significant marine accidents involving HNS. Summary details of the more significant incidents are presented in table 1.

Table 1

Year	Vessel	Location	Substance		
			Name	Chemical behaviour	Quantity spilled
1991	STORA KORSNAS LINK I	10 nm east off Teesside, England	Sodium chlorate	Unknown	40 tonnes
1993	GRAPE ONE	Off Devon	Xylene	Floater/evaporator	3,000 tonnes
1999	EVER DECENT	Off Dover	Sodium cyanide, potassium cyanide	Dissolver	Unknown



1999	Multitank ASCANIA (Current name: DEFNE D.)	Pentland Firth (north of Scotland)	Vinyl acetate	Evaporator	1,750 tonnes
2000	IEVOLI SUN *	Channel, 45 nm west of Cherbourg	Styrene, methyl ethyl ketone, isopropyl alcohol	Floaters	Styrene: 3,998 tonnes; Methyl ethyl ketone: 1,027 tonnes; Isopropyl alcohol: 996 tonnes
2000	NEPTUNIA	English Channel	Trimethyl acetylenene chloride	Unknown	Unknown
2001	A.B. BILBAO	Off Margate, English Channel	Ferrosilicon	Unknown	3,300 tonnes
2001	DUTCH AQUAMARINE	English Channel	Mixed chemical cargo, including 4,400 tonnes of acetic acid	Unknown	No pollution reported
2001	DUTCH NAVIGATOR (Current name: WILSON CAEN)	Bristol Channel, Avonmouth	Hydrofluorosilicic acid	Unknown	2 damaged ISO tanks
2001	HAPPY LADY (Current name: PRETTY LADY)	Off Shoeburyness, UK	Butane	Gas/evaporator	Unknown
2001	KILGAS CENTURION (Current name: ANGAS)	Off Great Yarmouth	Propane	Gas/evaporator	1 tonne
2001	ROSEBANK (Current name: ROSETHORN)	Off the Farne Islands	Bagged and palletised bags of NPK fertiliser and calcium nitrate	Unknown	Unknown
2001	DINA	Southwest coast of Wales	Calcium fluoride	Unknown	2,430 tonnes
2002	WESTER TILL (Current name: JIMDAL KAMLA)	About 6.5 nm south of Beachy Head	Various dangerous goods	Unknown	Unknown
2003	JAMBO	Entrance to Loch Broom, Ullapool, northwest coast of Scotland	Zinc sulphide	Unknown	1,000 tonnes
2006	ECE	50 nm west of Cherbourg, Les Casquets	Phosphoric acid	Dissolver	10,000 tonnes
2006	ENNERDALE	Southampton	Propane	Gas/evaporator	Unknown
2007	MSC NAPOLI	North of Trégastel, Côtes d'Armor	Undefined toxic substances	Unknown	Minimal
2009	NEWCASTLE	Falmouth	Ferrous sulphate (resulting in sulphuric acid)	Unknown	None
2010	ESTRADA	Harwich	Scale Inhibitor	Dissolver	None
2010	MT TRANS ARCTIC	Tees Port	Benzene	Evaporator/dissolver/floater	0.5 tonne

* The accident happened in French waters, but United Kingdom was involved in the response.



2. RESPONSE TO HNS MARINE POLLUTION

2.1. Monitoring capability

The United Kingdom has in its emergency response stockpile specialised monitoring and detection equipment for mobilisation in incidents involving marine spills of HNS.

The United Kingdom has the following specialised equipment for the monitoring of marine spills of HNS:

- Aerial surveillance: infrared/ultraviolet (IR/UV);
- Vessel surveillance: no dedicated craft;
- HNS forecasting models: CHEMSIS spill model for fate and trajectory and access to ALOHA for gaseous HNS trajectory modelling;
- Devices for measuring toxic atmosphere: access to contract laboratories;
- Other measuring devices (e.g. oxygen meter, pH meter, flash point meter, etc): access to contract laboratories;
- Sampling devices (including bottom sampling devices): only through contract laboratories.

2.2. Response capability

The United Kingdom's capability for responding to marine incidents involving HNS is through commercial contract where required.

2.2.1. Specialised safety equipment, vessels and special storage devices for responding to HNS incidents

The Commercial responders maintain a range of specialist HNS response equipment. These contractors will be called upon as needed.

The United Kingdom does not have any specialised vessels for dealing with marine incidents involving HNS.

2.2.2. Specialised response teams

The United Kingdom does not have a specialised response team for marine incidents involving HNS. Response would be provided via industry, through a combination of recognised chemical hazard experts, salvage companies, and UK accredited responders.

2.2.3. Scientific support

The United Kingdom has access to scientific and technical advice on marine incidents involving HNS through a contract with the National Chemical Emergency Centre (NCEC) as well as a number of call-off contracts for specialist HNS advice:

- Human health and safety: links with UK Health Protection Agency Centre for Radiation, Chemical and Environmental Hazards, Health Protection Scotland,

National Public Health Service in Wales and Health and Social Services Board in Northern Ireland;

- Environmental toxicology: through the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) laboratory, Lowestoft;
- Salvage/response: MCA HNS contractors.

3. TRAINING AND EXERCISES

3.1. Regular exercises and training programmes

The UK does not maintain a national exercise programme for HNS. Training and the maintenance of standards is the responsibility of the commercial providers who may be called upon to respond. Accreditation of training and standards for oil spill response is overseen by the MCA via a number of accredited UK associations.

3.2. Needs and suggestions for more specialised training programmes.

Those undertaken by commercial responders are deemed adequate for UK interests. Though opportunities for additional training will always be welcomed, and those involving international cooperation seen as highly desirable.

MCA would welcome participating in any EMSA led HNS-dedicated training.



4. RESOURCES AVAILABLE TO OTHER MEMBER STATES IN CASE OF REQUEST FOR ASSISTANCE

The United Kingdom can provide the MCA staff, NCEC, CEFAS and the Environment Group network, as well as aerial surveillance (IR/UV), to other Member States in case of an HNS spill incident:

5. SUMMARY

See table 3.

Table 3

Preparedness				Response capacities						Training and exercises
Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
No	Yes	Yes	Yes	Yes	Yes	Yes	No	Limited	Limited	No

Overview of the EU Member States policies and operational response capacities for HNS marine pollution

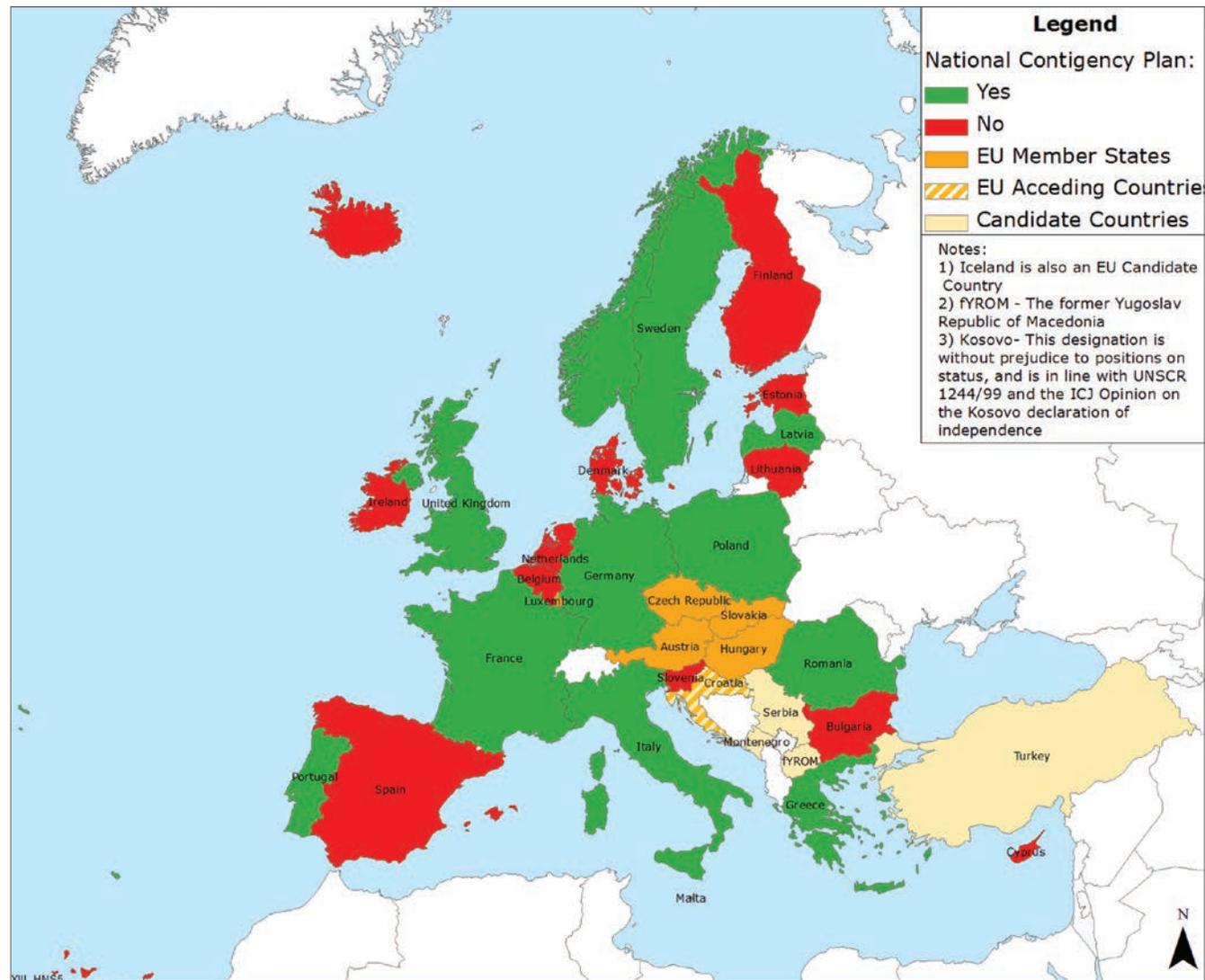


Inventory of EU Member States' Policies and Operational Response Capacities for HNS Marine Pollution 2013

Country	Preparedness				Response capacities						Training and exercises
	Ratification of the OPRC-HNS Protocol 2000	National Contingency Plan covers HNS	HNS Risk assessment conducted	Previous experience marine HNS incidents	Monitoring capability	Response capability	Specialised safety equipment	Specialised response vessels	Specialised response teams	Scientific support	
BELGIUM	No	No	Yes	Yes	Limited	Limited	Yes	Not specialised	Yes	Yes	No
BULGARIA	No	No	No	Yes, minor	Very limited	Very limited	No	No	Very limited	No	No
CYPRUS	No	No	No	No	No	Very limited	Limited	No	No	No	No
DENMARK	Yes	No	Yes	Yes	Yes	Limited	Yes	No	Not specialised	Yes	Yes
ESTONIA	Yes	No	Yes	No	Very limited	Very limited	No	No	No	Limited	No
FINLAND	No	No	Yes	Yes, minor	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FRANCE	Yes	Yes	Yes	Yes	Yes	Specialised	Yes	Yes	Yes	Yes	Yes
GERMANY	Yes	Yes	Yes	Yes	Yes	Specialised	Yes	Yes	Yes	Yes	Yes
GREECE	Yes	Yes	No	Yes	No	Very limited	No	No	No	Yes	No
ICELAND	No	No	No	No	No	Very limited	Limited	No	No	Limited	No
IRELAND	No	No	No	Yes	Limited	Very limited	Limited	No	No	No	No
ITALY	No	Yes	Yes	Yes	Yes	Yes	Limited	Limited	Not specialised	Yes	Limited
LATVIA	No	Yes	Yes	Yes	Limited	Very limited	Yes	No	No	Limited	No
LITHUANIA	No	No	No	No	No	Very limited	No	No	No	Limited	No
MALTA	Yes	Yes	Yes	Yes	Yes	Limited	Yes	No	Limited	Limited	Yes
THE NETHERLANDS	Yes	No	No	Yes	Yes	Limited	Limited	Very limited	Yes	Yes	Yes
NORWAY	Yes	Yes	Yes	No	Yes	Very limited	Yes	No	Yes	No	Yes
POLAND	Yes	Yes	Yes	No	Yes	Limited	Limited	Limited	Limited	Limited	Yes
PORTUGAL	Yes	Yes	No	Yes, minor	No	Very limited	No	No	No	No	No
ROMANIA	No	Yes	Yes	No	Yes	Very limited	No	Very limited	No	Yes	Yes
SLOVENIA	Yes	No	Yes	No	No	Very limited	Limited	No	Limited	Yes	No
SPAIN	Yes	No	No	Yes	Limited	Limited	No	Yes	No	Yes	Yes
SWEDEN	Yes	Yes	Yes	Yes	Specialised	Yes	Yes	Yes	Yes	Yes	Yes
UNITED KINGDOM	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Limited	Yes	Limited

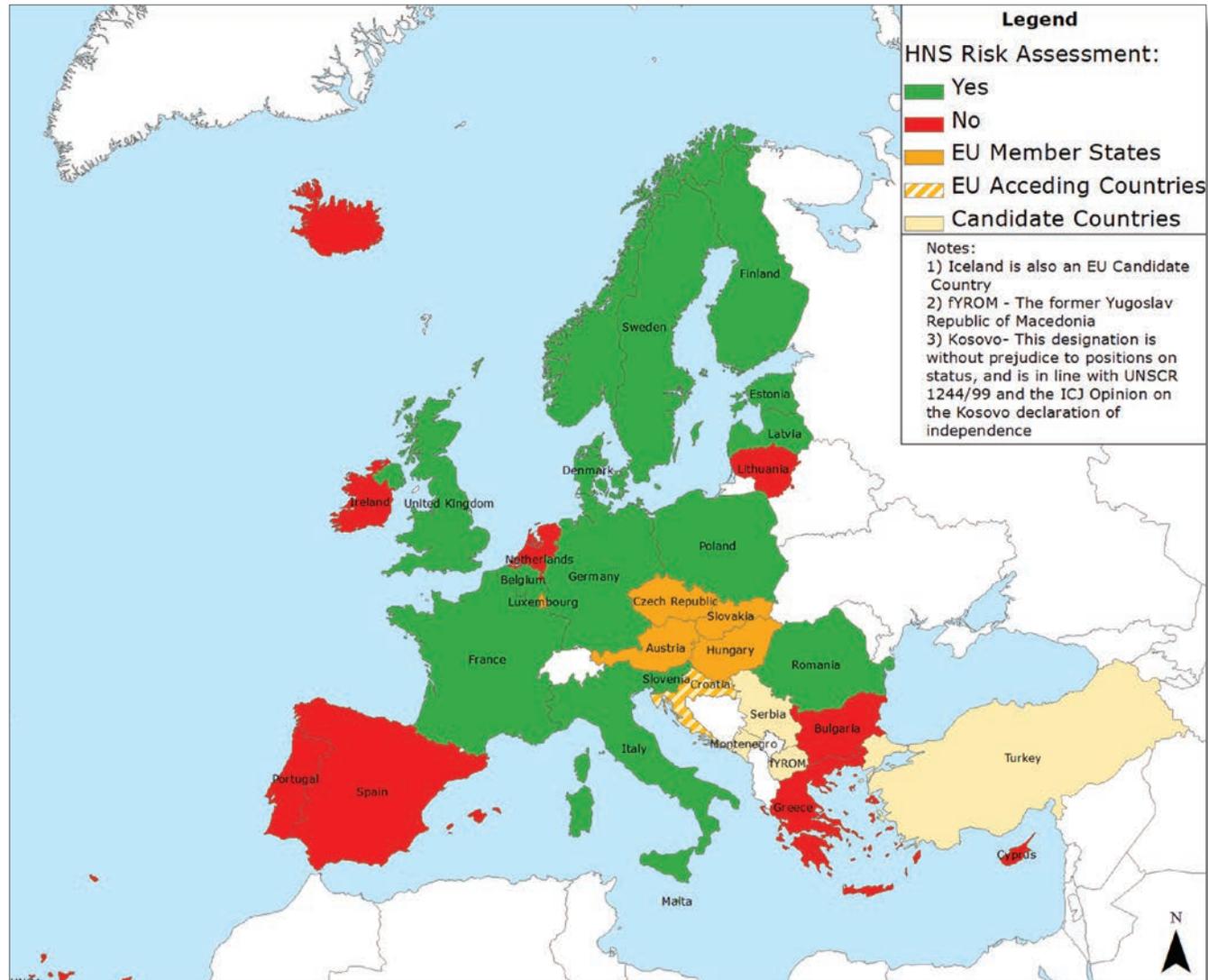


NATIONAL CONTINGENCY PLAN INCLUDING RESPONSE TO HNS



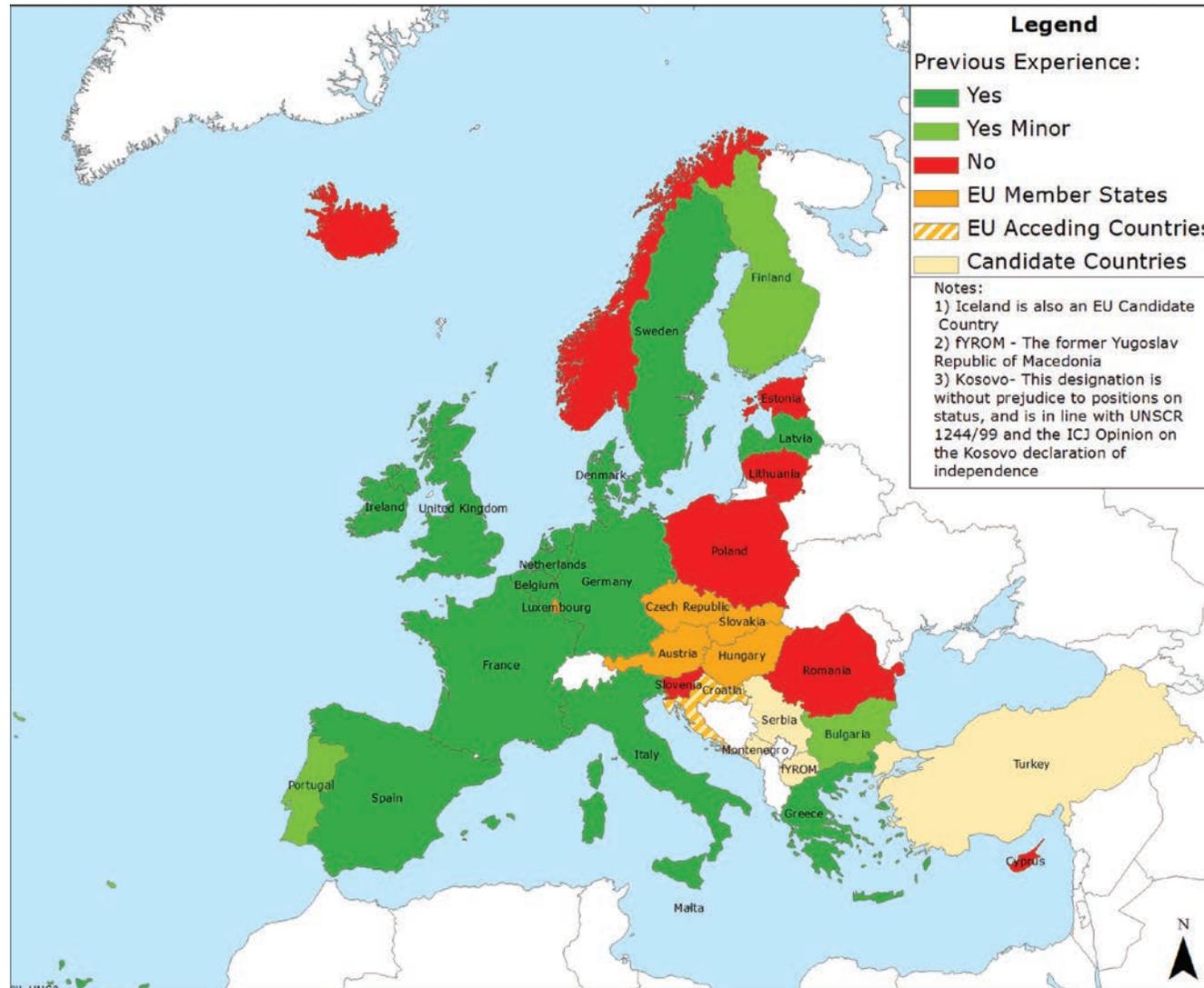


HNS RISK ASSESSMENT CONDUCTED



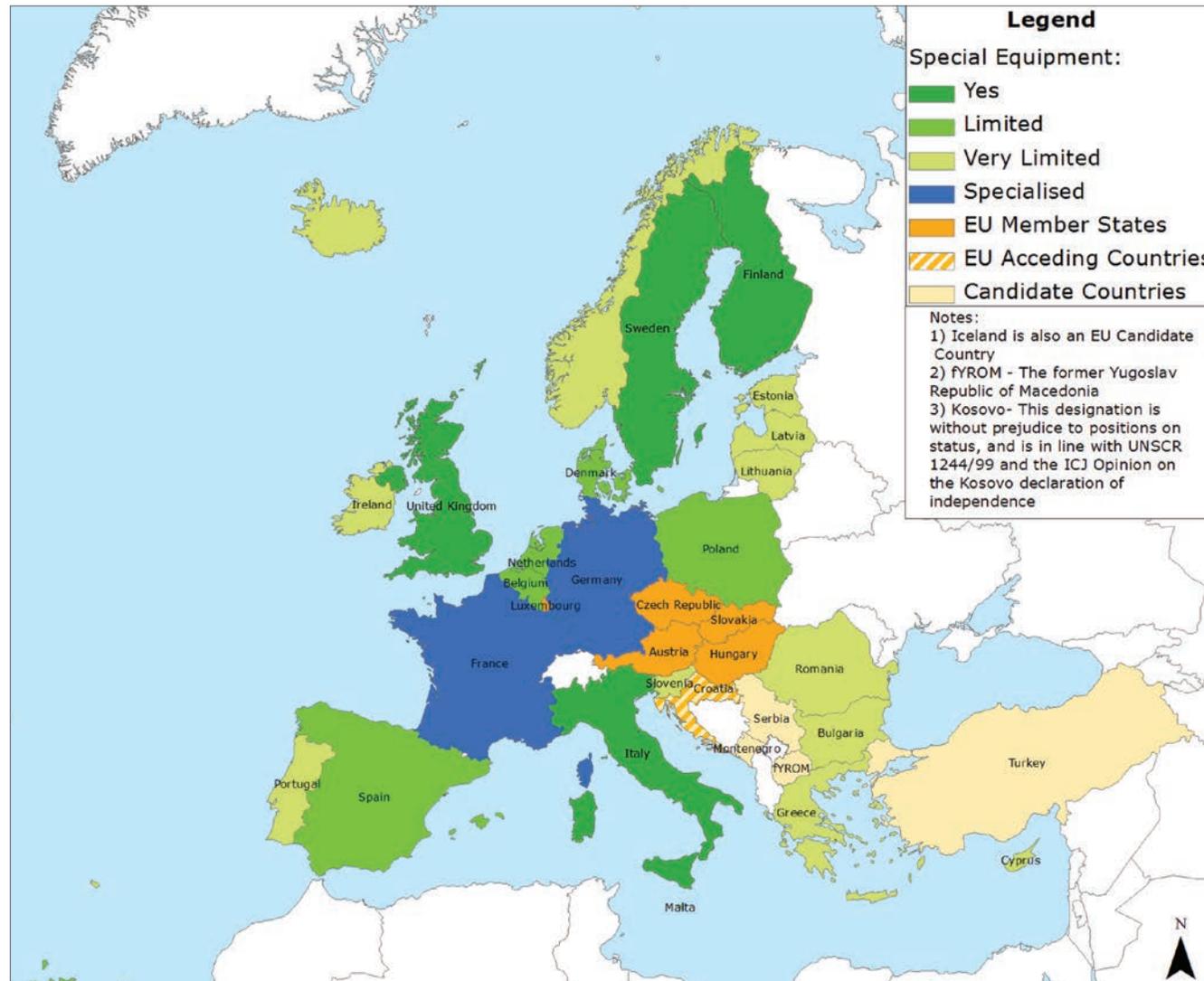


PREVIOUS EXPERIENCE IN HNS MARINE INCIDENTS



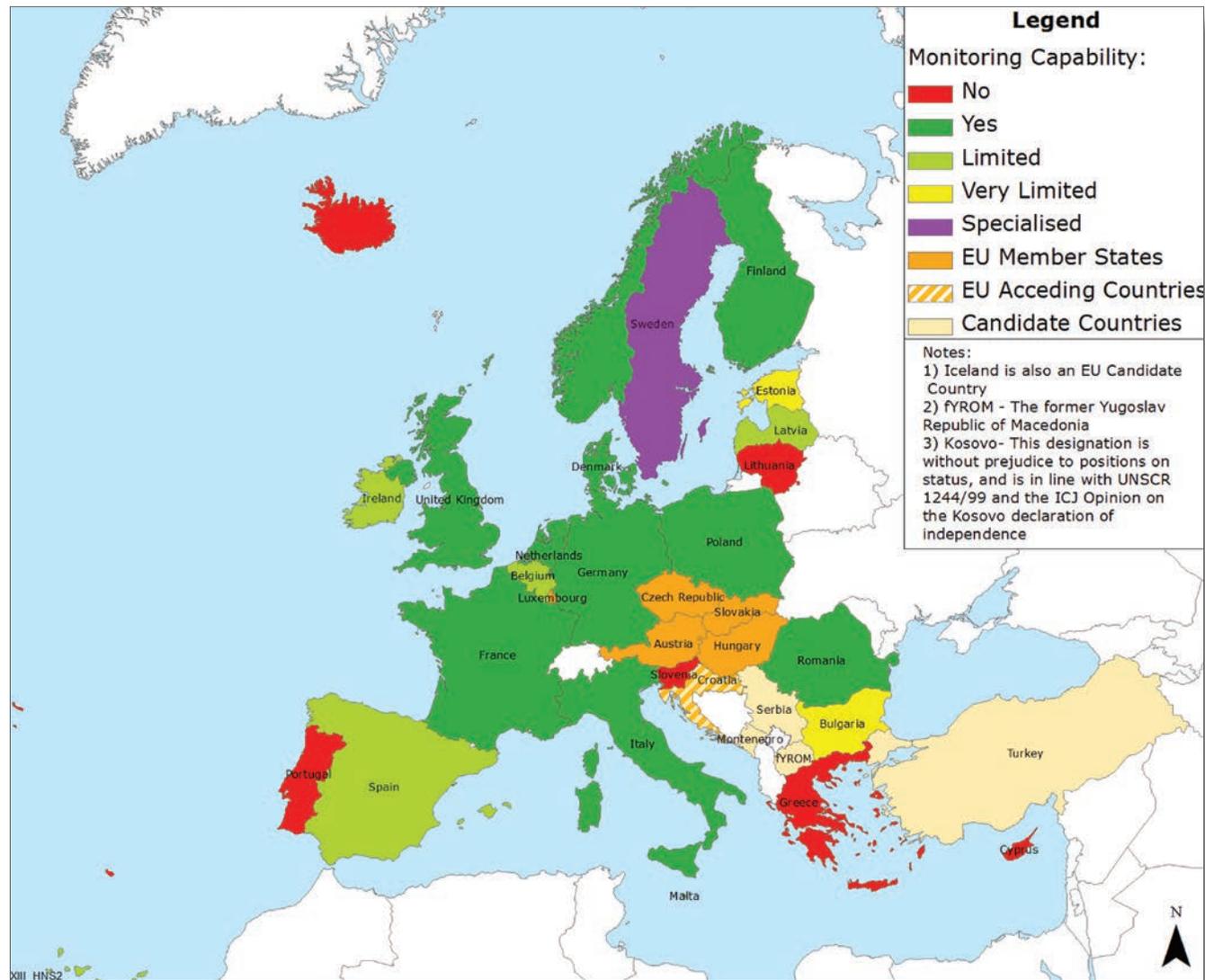


HNS RESPONSE CAPABILITY



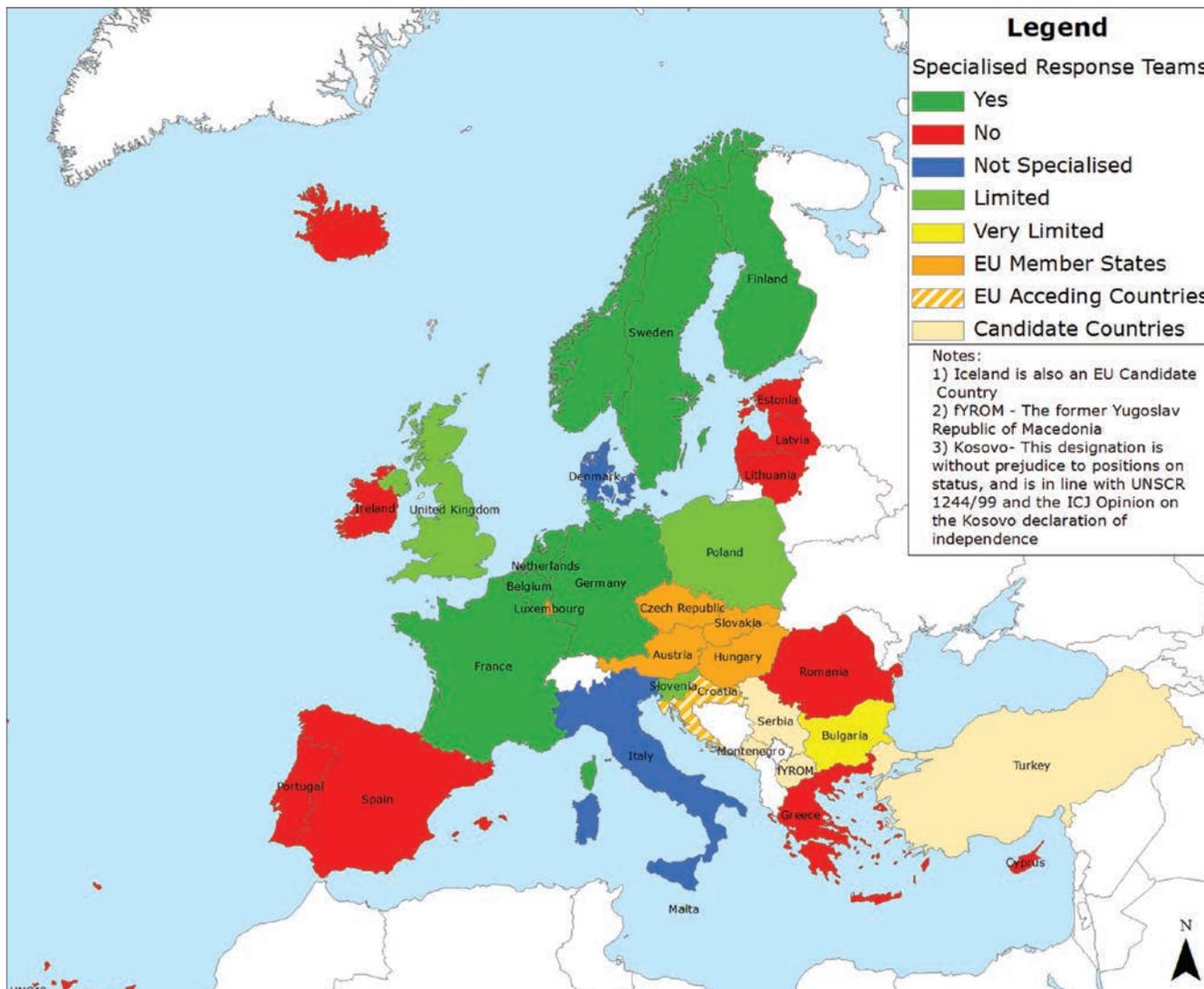


HNS MONITORING CAPABILITY



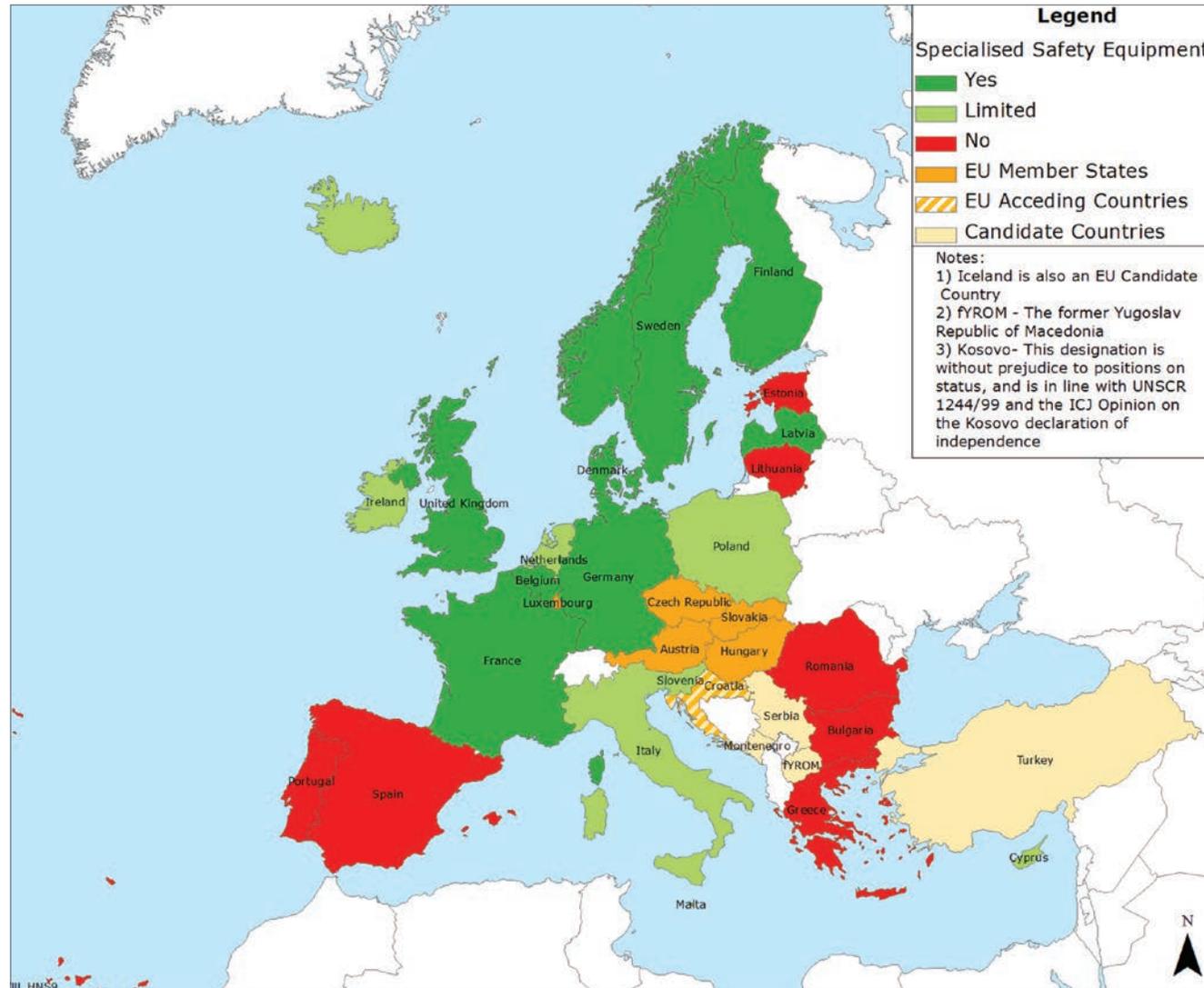


SPECIALISED HNS RESPONSE TEAMS AVAILABLE



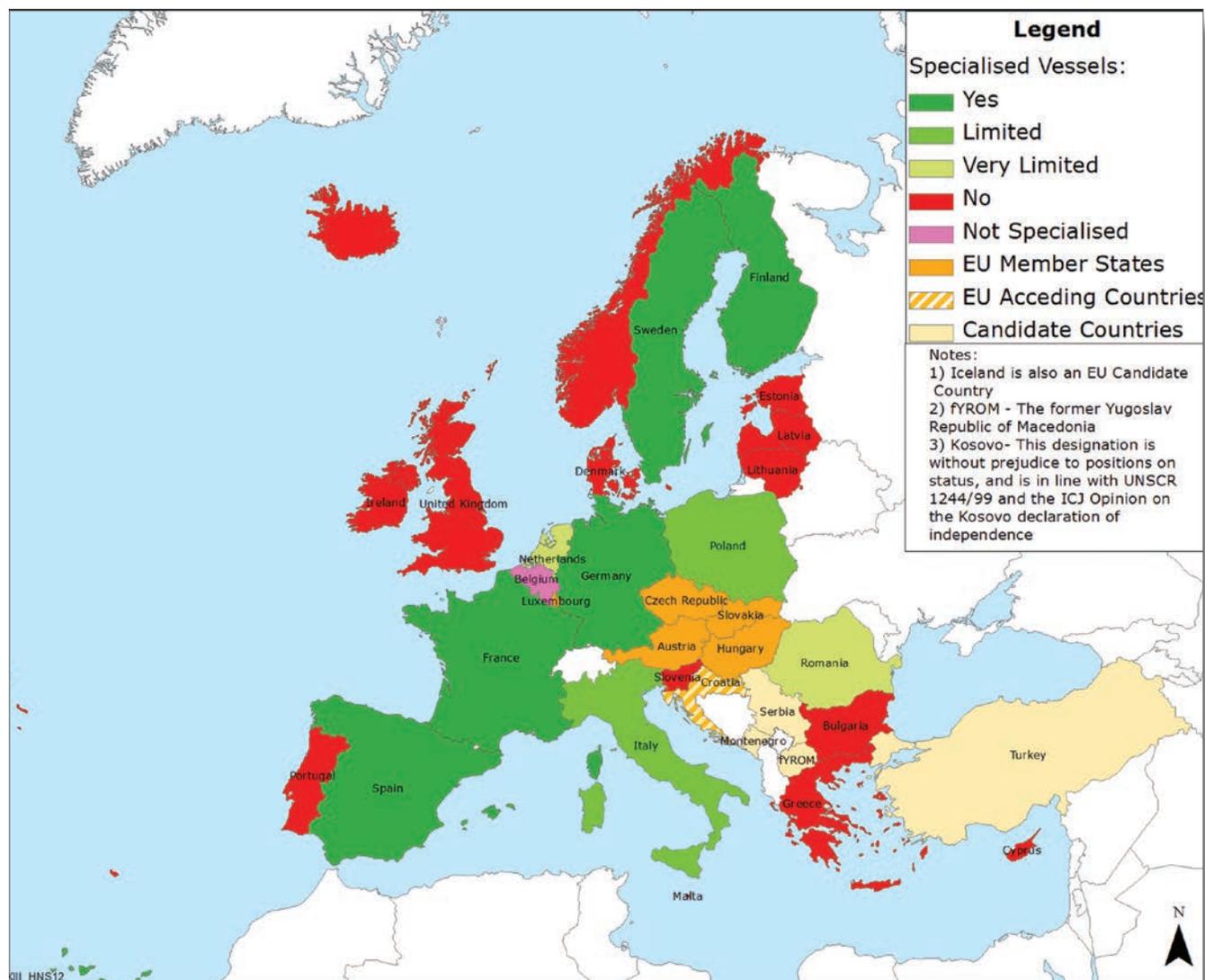


SPECIALISED HNS SAFETY EQUIPMENT





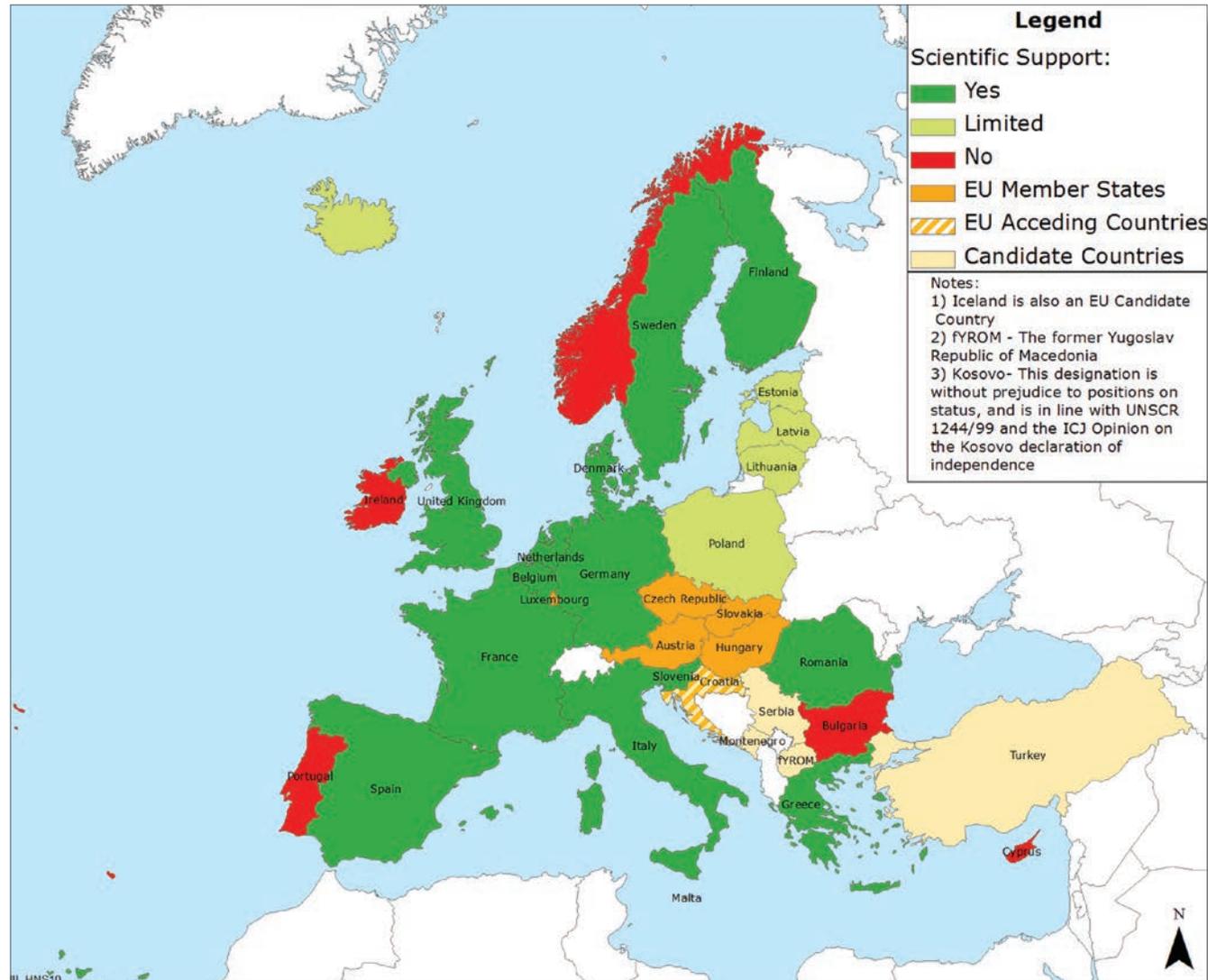
SPECIALISED HNS RESPONSE VESSELS AVAILABLE



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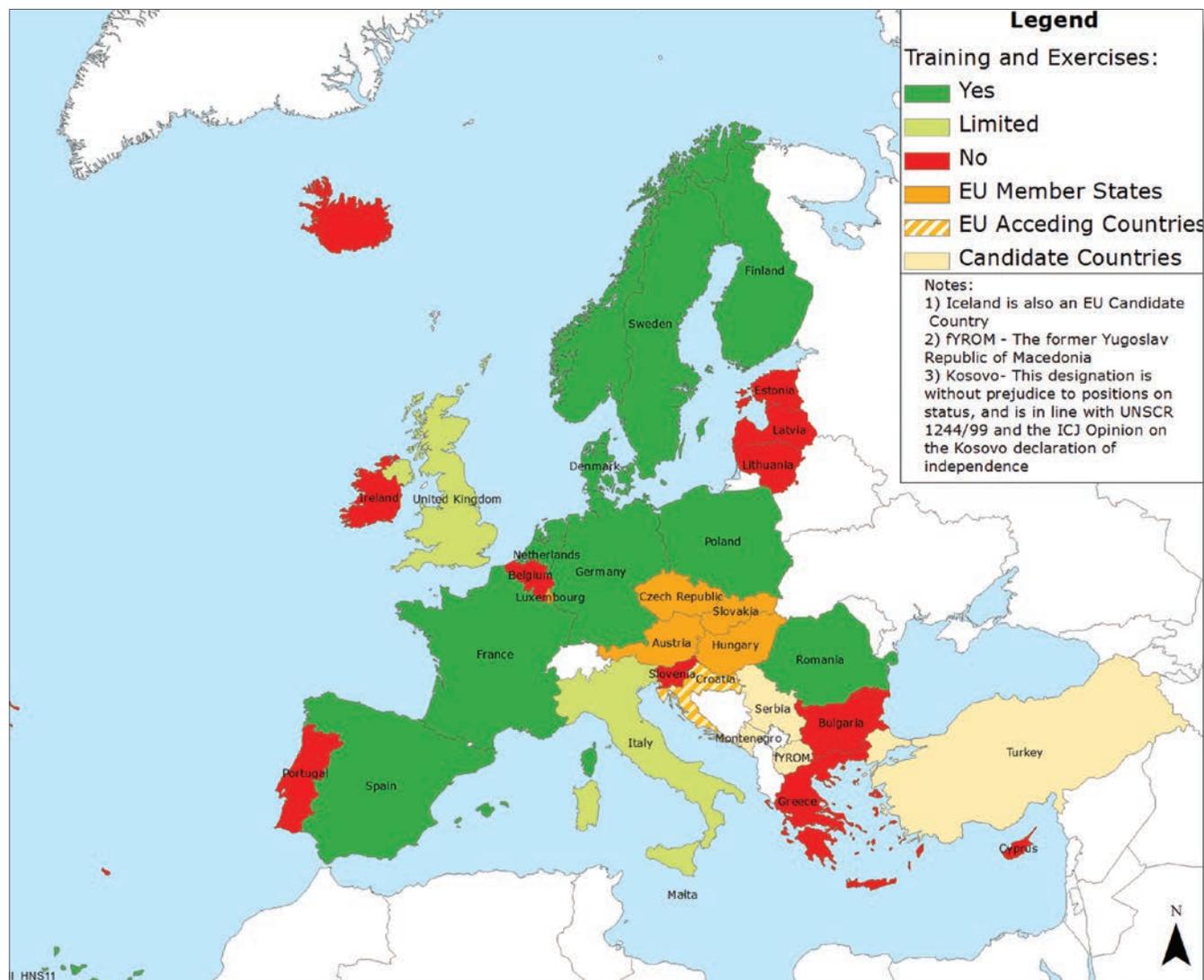


SPECIALISED SCIENTIFIC SUPPORT ON MARINE HNS INCIDENTS AVAILABLE



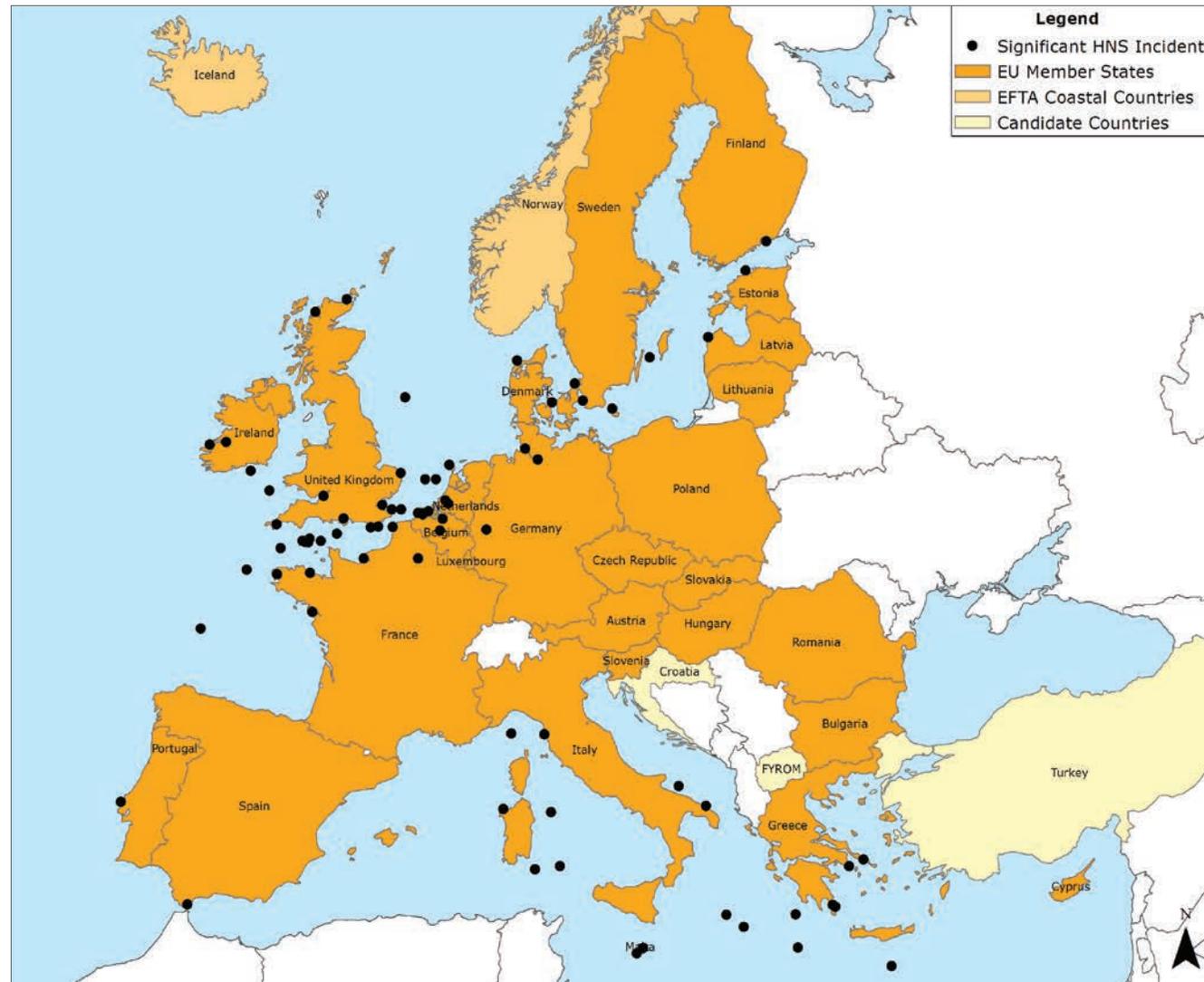


SPECIALISED HNS TRAINING AND EXERCISES AVAILABLE





SIGNIFICANT HNS INCIDENTS (1978-2013)



About EMSA

The European Maritime Safety Agency is one of the European Union's decentralised agencies. Based in Lisbon, the Agency provides technical assistance and support to the European Commission and Member States in the development and implementation of EU legislation on maritime safety, pollution by ships and maritime security. It has also been given operational tasks in the field of oil pollution response, vessel monitoring and long-range identification and tracking of vessels.

www.emsa.europa.eu

