

2.5 DISPERSANTS

2.5.1 Present situation

Use of dispersants by Contracting Parties, national regulations for acceptance and use, specific national criteria.

2.5.1.1 Belgium

There are no specific regulations or test procedures for approval of dispersants in Belgium. Their use is regulated by law. In case of an oil pollution incident, the first priority is the use of mechanical recovery equipment. The use of oil dispersant is a second option in oil pollution combating. Their use can only be permitted by MUMM, when an evaluation of the circumstances indicates that the chemical treatment is expected to reduce the anticipated negative effects of the pollution on the marine environment compared with natural processes or other combating methods (Concept of NEBA) and no formal evaluation procedure. See: <http://odnature.naturalsciences.be/mumm/en/national/neba>

2.5.1.2 Denmark

The Danish policy concerning the use of dispersants was taken as a follow-up to the “blow out” in 1978 at the Norwegian oil field Ekofisk in the North Sea. That same year, an expert panel analysed the issue and the resulting general advice was that dispersants should only be used in exceptional cases. The panel comprised all relevant government agencies and ministries as well as people from the university world.

The advice from the expert panel was incorporated into the official Danish oil contingency planning and preparedness plans. At that time, a test was carried out by DANTEST (as mentioned in the Bonn Agreement manual) but no further test has been carried out since that time. If Denmark decided to use dispersants, the decision would be taken on the received information from the Admiral Danish Fleet concerning the oil type, the amount, time of the year and the geographical position, in other words decisions would be taken on a case-by-case basis. The use of dispersants for the purpose of cleaning beaches or stony coastlines is limited to protect the biota in the surface layers. Mechanical methods are preferred in view of the toxicity of dispersed oil.

Denmark does not have any requirements for approval and generally accepts dispersants which are approved by 2 or 3 other Bonn Agreement countries and in the list published in the Bonn Agreement (BP 1100 X, Enersperse 1583). Dispersants are used only if mechanical combating is impossible or less suitable. In principle, the “discharge” of dispersants is prohibited. Permits may be granted by the Ministry of the Environment, on the advice of the Danish EPA, after the product has cleared a pre-evaluation by an independent laboratory. The Danish EPA is only inclined to accept the use of chemical dispersants if, for example, human beings are in danger or if larger concentrations of sea fowl or particularly valuable coastal areas are threatened by severe oil pollution incidents or if it is the only way to protect other valuable areas. Normally the Danish EPA oil combating force will already be on the scene and evaluating the use/non-use of dispersants.

2.5.1.3 France

Chemical dispersion is one of the response options as well as mechanical recovery; however the use of dispersants is subject to meteorological, environmental and oil dispersibility conditions. Geographical boundaries have been drawn, beyond which the use of dispersants can be considered without major risks to the marine environment. These boundaries have been defined on the basis of realistic scenarios of spillages of 10, 100 and 1 000 tonnes, and they take into account the presence of resources that are sensitive to dispersed oil (fisheries, aquaculture, ...) in the zone. Inside the boundaries, special precautions are taken when using dispersants. The boundaries may be changed in the course of the treatment by the Maritime Prefect, in consultation those bodies of the French administration which are concerned (mainly IFREMER and Cedre). There is an approval procedure based on standard laboratory tests for efficiency, toxicity and biodegradability of the dispersant. The list of accepted products is published on CEDRE’s Website.

2.5.1.4 Germany

The use of dispersants is limited to a minimum in the coastal regions; their application is less restrictive on the open sea, but, weather permitting, mechanical recovery has priority in all cases.

In Germany, dispersants can be used only with the approval of the official administration (Havariekommando in Cuxhaven). In the North Sea, dispersants must not be used in shallow waters (less than 10 m depth). Restricted use is possible within the range of 10 to 20 m depth. There is no restriction in waters deeper than 20 m. In the Baltic Sea, Germany has objections to dispersant application because this sea has poor water exchange and is shallow in wide areas. The Baltic Sea has practically no tidal currents which may dilute the dispersed oil in the water body.

Dispersant use is not a control method of first choice. Due to this fact we have no extra methods for testing dispersants. Up until now, it has seemed quite reasonable to accept a product if it appears on the list of accepted products in France or the UK.

2.5.1.5 The Netherlands

The Netherlands primary response to an oil spill is mechanical recovery, provided the sea conditions are favourable. Depending on the type and quantity of the floating oil slick, mechanical dispersion is considered as a secondary response option.

- (i) if applicable then the following conditions should be met:
 - oil volume > 200 m³; layer thickness 50-200 um and water depth > 20 m
 - oil volume < 200 m³; layer thickness 50-200 um and water depth > 5 m.
- (ii) no operational limitations exist when:
 - sufficient visibility (with regard to spraying aircraft)
 - oil is one slick or more then one big slicks
 - layer thickness is over 50 um
 - viscosity is < 5000 cSt and
 - wind force between 3 and 7 Bft.

Ecologically sensitive situations and areas have been identified, for example, an oil slick in a remote area that requires a long mobilisation time for a recovery vessel to arrive, with migrating birds in the area. As the birds may get contaminated, spraying dispersants could be a viable option. The Wadden Sea north of the mainland is very sensitive. An oil slick released west of Rotterdam could end up in this Wadden Sea driven by prevailing winds (southwest). Applying dispersants could prevent this happening, as the oil would disperse into the water column and not be influenced by wind.

The dispersants that have been tested in EU, or the Bonn Agreement or HELCOM member states list, will be accepted in Netherlands to avoid the need for additional testing.

Netherlands has not the intention to stock dispersants and would seek assistance from UK since they have both the dispersants and the spraying aircraft. Studying the mobilization time from Southampton and/or Coventry, any part of EEZ can be reached in time.

2.5.1.6 Norway

Dispersants are valuable tools in marine oil spill response. Dispersants can prevent and reduce acute oil pollution. Used properly, modern dispersants reduce the impact on the environment, and are particularly well suited to protection of sea birds and reduction of shoreline oiling. New regulations entered into

force on 1 January 2002. The regulations state that dispersants should be used when their use will result in the least environmental damage.

Use of dispersants must be documented in contingency plan

The use of dispersants - which in many ways can be compared to dishwashing liquids, but which are adjusted to different types of oil – must be documented in a contingency plan. Specific requirements for testing of acute toxicity and efficiency must be met.

Net Environmental Benefit

The dispersants will only be used when the response in overall terms will benefit the environment. They will not be used on spawning grounds. The Norwegian Pollution Control Authority, SFT, will carefully assess whether they can be used in areas with poor water exchange and in shallow, coastal waters.

Acute oil spills can cause great damage on the marine environment. The potential for damage will largely depend on the natural resources that are exposed to the oil spill, the type of oil and the volume of oil spilled. The potential for damage does not always coincide with the size of the spill.

Response against oil pollution

Today mechanical containment and recovery and dispersants are used to prevent and to respond to oil pollution. Monitoring of oil pollution is also regarded as a means of response.

Regulating the use of dispersants

The composition and use of dispersants are described in the new regulations. The purpose is to combat acute pollution efficiently. The regulations allow the use of dispersants when this is the best alternative for the environment.

Private enterprises or municipalities that wish to use dispersants must state in their contingency plans the oil spill situations in which they would use this response. SFT will then consider whether the criteria for use are met.

Must apply to use dispersants

In situations where dispersants would be beneficial, but where the user has not pre-planned such a response, an application for authorisation must be made to SFT. SFT has a 24-hour response centre to handle incidents of acute pollution, and will consider the application immediately.

More information

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2.5.2 Sweden

Dispersants are not used in Sweden.

2.5.3 United Kingdom

The UK's primary response to an oil spill is the aerial application of dispersants, although some mechanical recovery equipment is held as a secondary response option. Dispersants are used when an oil spill threatens damage to UK resources and the spill cannot be left to evaporate and degrade naturally ; they are used when weather conditions are appropriate and the oil is amenable to dispersion.

Dispersant action will be initiated only where it is likely to be effective and in the judgement of experts, there is a significant threat of damage to birds or marine life on the coast of the UK.

No dispersant use can take place in water depths of 20 metres or less, or within one mile of such depth, without the approval of the relevant Fisheries Department. Such approval will be given on a case-by-case basis if they are satisfied, after consultation with the relevant statutory conservation agency, that the marine environment will not suffer.

Under Part 2 of the Food and Environmental Protection Act of 1995 and the Deposits in the Sea (Exemption) Order 1985, only dispersants which have passed the relevant tests may be used.

Table 1 national policies concerning the use of dispersants

Country	Use of dispersants :	Geographical limits	Approval tests existing :			List of approved products
			efficacy	toxicity	biodegradability	
Belgium	As a 2 nd option (after NEBA)	None (only restrictions : volume of used dispersant < 20% of the volume of oil treated + no more than 100 t. of chemical products to use per pollution)	None	None	None	None MUMM advises on the use of the products accepted by the other Contracting Parties.
Denmark	As a last resort	None (case - by - case)	Danish Institute for Testing & Verification (DANTEST)		None	yes : list from the Danish EPA + those approved by at least two Contracting Parties.
France	As a 2 nd option	3 limits : <ul style="list-style-type: none"> • Depending on the volume of oil spilled (10,100 or 1000 t) • Special adjustments when sensible sites are at risk 	By CEDRE (the product must pass the efficacy test before being tested for toxicity and biodegradability)	By the MNHN (Lab. in Concarneau, Brittany)	INERIS + tests for the non-inhibition of the biodegradation by the product	yes : list from the CEDRE
			Validity of the tests = 5 years			

Germany	As a last resort (after a NEBA)	Use : <ul style="list-style-type: none"> • authorized in waters deeper than 20m • restricted in waters between 20 and 10 m depth • forbidden in waters less than 10m deep. • forbidden in the Baltic Sea area & in the Wassen Sea (hauts fonds) • sensitivity maps (to protect sensitive areas) 	None	None	None	None : Use of the ones approved by France or UK
Netherlands	As a last resort	If the oil slick has: <ul style="list-style-type: none"> • Thickness between 50 and 200µm, • Viscosity <5000cSt; then: • For a vol. >200m³, water depth >20m • For a vol.<200m³, water depth >5m 	Use of the products approved by the other Contracting Parties so : <ul style="list-style-type: none"> • No test is being conducted in NL • No stock 			
Norway	As a 2 nd option (the application must be made with the authorization of the Norwegian Pollution Control Authority)	On a case-by-case basis – generally not less than 20 m deep and not less than 200 m from shore.	Tests for efficacy and toxicity must be conducted by the companies dealing with oil products (refineries, oil terminals = ExxonMobile, Statoil, Hydro)		None	None
Sweden	None	None	None	None	None	None
United Kingdom	As a 1st option :	Limits for pre-authorization : <ul style="list-style-type: none"> • In water more than 1 nautical mile beyond the 20 m depth or coastline (otherwise, in shallow waters, DEFRA must be consulted) • Sensitivity maps 	National Environmental Technology Centre of AEA (1st test to be	CEFAS (Centre for Environment, Fisheries & Aquaculture	None	Yes : list of products accepted by the DEFRA (Department for Environment,

			conducted)	Sciences) 2nd : if the product approved for efficacy)		Food & Rural Affairs)
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Annex 1 to Chapter 2.5 on Dispersants

Nationally accepted dispersants

1. Acceptance by countries

Products :		UK	France	Others
Conventional dispersants (type 1)	Arrow Emulsol LW	+		
	BP 1100X			+ (Denmark)
	Gamlen OSR 4000	+		
	Nalfleet Maxi-Clean 2	+		
	Seacare OSD	+		
Concentrate dispersants (types 2 & 3)	Agma DR 379	+		
	Agma OSD 569	+		
	Arrow Emulsol Super-concentrate LE 2/3	+		
	Bioreco R93		+	
	Caflon OSD	+		
	Compound W-2096	+		
	Corexit 9500		+	
	Corexit 9527			Stocks in Belgium (13 t.)
	Dasic Slickgone EW	+		
	Dasic Slickgone NS	+	+	Stocks in Belgium (10 t.) Stocks in Norway (~210 t. by NOFO)
	Disperrep 8		+	
	Disperrep 12		+	
	Dispolene 36S		+	
	Dispolene 38S		+	
	Emulgal C-100		+	
	Enersperse 1040	+		
	Enersperse 1583			+ (Denmark)
	Finasol OSR 51	+		
	Finasol OSR 52	+	+	
	Finasol OSR 61		+	
	Finasol OSR 62		+	
	Gamlen OD 4000 (PE 998)	+	+	
	Inipol IP 80		+	
	Inipol IP 90		+	
	Inipol IPC		+	
	Neutralec C		+	
	NU CRU	+	+	
	Oceania 1000		+	
	OSD/LT Oil Spill Dispersant	+		
	OSD – 2B		+	

	Petrotec 25		+	
	Radiagreen OSD	+	+	
	Seacare Ecosperse	+		
	Superdispersant 25	+		
	Veclean	+		

2. Dispersants accepted by at least two Bonn Agreement Contracting Parties (UK and France) :

Products :	UK	France
DASIC SLICKGONE NS *	+	+
FINASOL OSR-52	+	+
GAMLEN OD 4000 (PE 998)	+	+
NU CRU	+	+
RADIAGREEN OSD	+	+

*stocks also exist in Norway and Belgium