

CURRENT DEVELOPMENTS IN THE RISK POLICY OF THE NORTH SEA: FROM A TRIPARTITE TO A QUADRIPARTITE BONN AGREEMENT RESPONSIBILITY ZONE

Eric Donnay

Federal Public Service Public Health, Safety of the Food Chain and Environment
Directorate general Environment, Victor Hortaplein 40, Bus10, Local 2C09
B-1060 Brussels, Belgium
E-mail: Eric.Donnay@health.fgov.be

Abstract

The intense shipping traffic in the North Sea results in a high risk of ship-sourced marine pollution. The Bonn Agreement offers an operational framework for regional cooperation between North Sea countries against pollution of the sea by oil and other harmful substances. The Tripartite joint responsibility zone established under this agreement between United Kingdom, France and Belgium in the southern part of the North Sea is an important instrument of this cooperation. The recent decision to extend the Bonn Agreement Tripartite zone to a Quadripartite zone through the participation of the Netherlands offers interesting perspectives for reinforced cooperation and better coordination of the national strategies for dealing with marine pollution response preparedness in the southern part of the North Sea. This on-going development will help the four countries concerned to be better prepared to meet the challenge of the increasing risk of marine pollution posed by the continuous growth of shipping in the North Sea, which is associated with an increase of the quantities of heavy oils and harmful or noxious substances carried on board vessels.

Background

When on 18 March 1967, the tanker *Torrey Canyon* ran aground on Seven Stones reef, west of Cornwall, United Kingdom, she caused the first major marine oil spill disaster in history. Since it was the first time, no plans had been prepared beforehand to deal with it. Unsuccessful attempts were made to contain and combat the oil spill such as dropping napalm in an attempt to burn the oil or spraying large amounts of detergents, which later proved to be inefficient and very toxic for the marine organisms. The Cornish and part of the French coast were contaminated and a great number of sea birds were killed. On that occasion, the public became aware of the dramatic impact of oil pollution on the marine environment. Furthermore, the authorities learned from the *Torrey Canyon* disaster that there was a real need to develop specific response techniques and equipment for dealing with oil spills at sea as well as to establish international cooperation mechanisms in this field. It is therefore not by coincidence that the eight countries bordering the North Sea (United Kingdom, Norway, Sweden, Denmark, Germany, the Netherlands, Belgium and France) decided in 1969 in Bonn, Germany, to sign an 'agreement for cooperation in dealing with the pollution of the North Sea by oil', later referred to as the 'Bonn Agreement'.

Since then, the Bonn Agreement has been amended in 1983 in order to extend its scope to harmful substances other than oil and to add the European Community to the list of contracting parties. The Bonn Agreement was the first regional agreement of its kind and as such it has been the precursor for similar agreements covering other European seas: the Helsinki convention (1974 and 1992) for the Baltic Sea, the Barcelona convention (1976) for the Mediterranean Sea and the Lisbon agreement for the Northeast Atlantic (1990) (NB: The Lisbon agreement has not yet entered into force). This international framework for cooperation in combating pollution is complemented by two European mechanisms: the 'Community

framework for cooperation in the field of accidental or deliberate marine pollution’ and a more recent instrument: the ‘Community mechanism for reinforced cooperation in civil protection assistance interventions’, which covers both civil protection and marine pollution. Fig. 1 illustrates how these regional agreements overlap and shows the central position of the European Community, which is party to all these agreements.

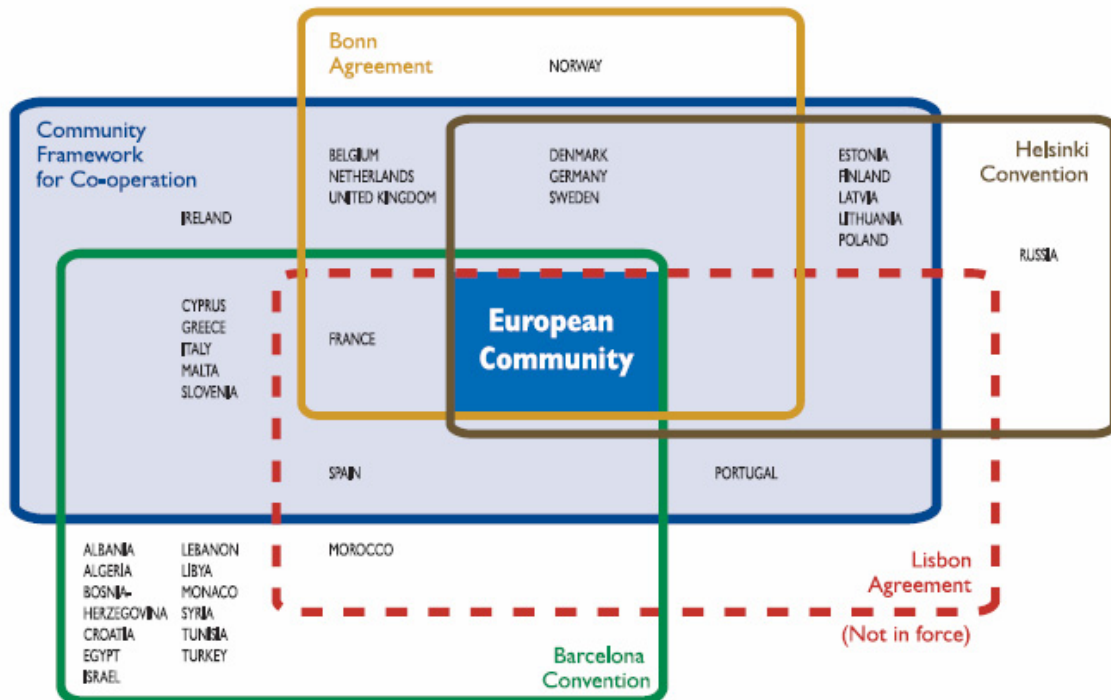


Fig. 1. International framework for cooperation in combating marine pollution in European waters (Source: EMSA).

More recently, in 2002, during the aftermath of the ERIKA accident, the European Commission decided to create a European Maritime Safety Agency (EMSA). This agency is mainly dealing with maritime safety issues (i.e. the reduction of the risk of maritime accidents, marine pollution from ships and the loss of human lives at sea) but it has also received the task for providing technical assistance to member states in the field of operational response to marine pollution. In this respect, EMSA must be considered as a pan-European platform that gives access to technical support to member states when they request assistance while responding to a major pollution accident. The response to marine pollution belongs indeed to the competency of the member states, which have established ways to cooperate and to provide mutual assistance through regional agreements that address their specific (regional) needs. Therefore EMSA's support must be unambiguously seen as a complement to the assistance that member states can obtain through the respective regional agreements and not as a way to replace these agreements. On the contrary, EMSA's contributions are likely to reinforce the participation of the European Community in the different regional agreements to the benefit of each of them.

The Bonn Agreement: an operational instrument against marine pollution

The Bonn Agreement is focused specifically on operational and technical aspects of combating marine pollution and encourages the North Sea countries to jointly improve their response capacity. The terms of reference of the Bonn agreement can be summarized as follows:

- Promote sharing of information and resources in response to a spill.

- Encourage sharing of surveillance resources as an aid to detecting and combating marine pollution and prevent violation of anti-pollution regulations.
- Encourage Contracting Parties to come to the aid of others by providing pollution response assets and other resources when needed.

For the purposes of marine pollution monitoring and control, the geographical area covered by the Bonn Agreement is divided up to eight 'zones of responsibility' with supervisory responsibilities being assigned to each of the contracting states as illustrated in Fig. 2 below.



Fig. 2. The Bonn Agreement area and zones of responsibility (Source: Bonn Agreement).

The zones of, respectively, the southern part of the North Sea and the Channel area are placed under the responsibility of groups of Contracting Parties and are for that reason called 'zones of joint responsibility'. The interventions of the Contracting Parties within these zones of joint responsibility are subject to the provisions of technical arrangements agreed between the Parties concerned.

The guidelines and procedures for the provision of assistance in pollution response by one Contracting Party to another are presented in the 'Bonn Agreement Counter Pollution Manual', which is continually updated. Another important Bonn Agreement operational guide is the 'Aerial Surveillance Handbook', which provides for uniform guidelines and standard procedures for the aerial monitoring and control of marine pollution.

Joint operations are carried out on a regular basis under the umbrella of the Bonn Agreement according to a yearly calendar of operations. Joint exercises (BONNEX) are organised for training for the deployment of pollution combating equipment and the testing of the operational coordination. Contracting parties are also joining their efforts in coordinated flight campaigns for the control of marine pollution.

The Bonn Agreement working group OTSOPA meets on a yearly basis in order to continuously review the state of the art developments of all relevant operational, technical and scientific matters related to monitoring and combating marine pollution. In this way Bonn Agreement experts always remain at the forefront of knowledge and expertise, what allows them to maintain a leading position in the field of operational response to marine pollution since the beginning of the Bonn Agreement. The pioneer function of the Bonn Agreement is illustrated by

the fact that all Bonn Agreement countries have set up national marine pollution response capacities and procedures for mutual assistance well before it became an international requirement with the entry into force in 1995 of the International Convention on Oil Pollution Preparedness, Response and Cooperation 1990 (OPRC, 1990).

The risk of marine pollution: assessment and evolution

In a general way, shipping can have a negative impact on the marine environment due to the discharge of oil and wastes, cleaning and venting tanks, air pollution, loss of cargoes containing harmful substances (50% of goods transported at sea can be described as dangerous), discharges of ship's ballast water which may contain non-indigenous species and the use of anti-fouling paints containing biocides (OSPAR, 2000).

The accident of the *Torrey Canyon* pointed out the risk associated with tankers. However ship-sourced marine pollution is not exclusively the result of accidental discharges. Ships are also deliberately carrying out operational discharges of oily waste at sea. While large accidental oil spills cause spectacular environmental damages in a well defined geographical area at a given period of time, operational discharges are responsible for a permanent background concentration of pollutants affecting the whole North Sea area. This latter form of pollution is more diffuse and less visible than major spill accidents, but it gives rise to the same level of concern since it is likely to have a long-term detrimental effect on the marine ecosystems.

A diminution of the risk of ship's accidents is addressed by continuous effort for improving safety standards in shipping transport. The main legal instrument for the regulation of operational discharges from ships is the International Convention for the Prevention of Pollution from Ships and its annexes (MARPOL 73/78). An important measure for the protection of the marine environment of the North Sea against oil pollution is the designation of the North Sea as 'special area' under MARPOL 73/78 annex I (oil), which became effective in 1999. Under this provision ships are exclusively allowed to discharge ship-generated oily waste from machinery spaces using an oil separator device producing oil concentrations not exceeding 15 ppm. Such a low concentration does not produce visible trace or film at the sea surface and is considered to be harmless for the marine environment.

Despite these measures the risk of pollution, either accidental or deliberate, is still significantly present in the North Sea. The fact remains that the North Sea area contains some of the busiest shipping routes in the world. The high density of shipping in the North Sea logically leads to a higher risk of accidents and a higher probability of illegal discharges compared to the level of these risks in areas with lesser shipping density. Furthermore, it should be noted that due to the shallow depths in the southern part of the North Sea, vessel traffic is confined within narrow navigation channels forcing ships to come at close range of each other and limiting the possibilities for collision avoidance manoeuvres. Therefore the southern part of the North Sea must be considered as a high-risk area for shipping accidents likely to cause significant marine pollution.

The main source of information for assessing the situation of marine pollution in the North Sea is the aerial surveillance carried out in the framework of the Bonn Agreement. The data on observed marine pollution collected by the aerial surveillance program of each Contracting Party is compiled by the Bonn Agreement secretariat and published in an 'Annual report on aerial surveillance'. This data has been collected during many years using standardised observation procedures and reporting formats. This report is therefore a valuable reference for assessing the current situation and the recent trends in the evolution of marine pollution in the North Sea. However one should keep in mind the fact that this data only reflects the number of spills observed during surveillance flights and therefore only represents a fraction of the actual

number of spills. A study carried out by the Management Unit of the North Sea Mathematical Models (MUMM) indicates that spills observed by the Belgian surveillance aircraft during the period 1991-1995 could represent only 15% to 30% of the actual total ship-sourced pollution (Schallier *et al.*, 1996). This does not affect the fact that the Bonn Agreement aerial surveillance data clearly shows a decreasing trend in the number of observed spills per flight hour (Fig. 3).

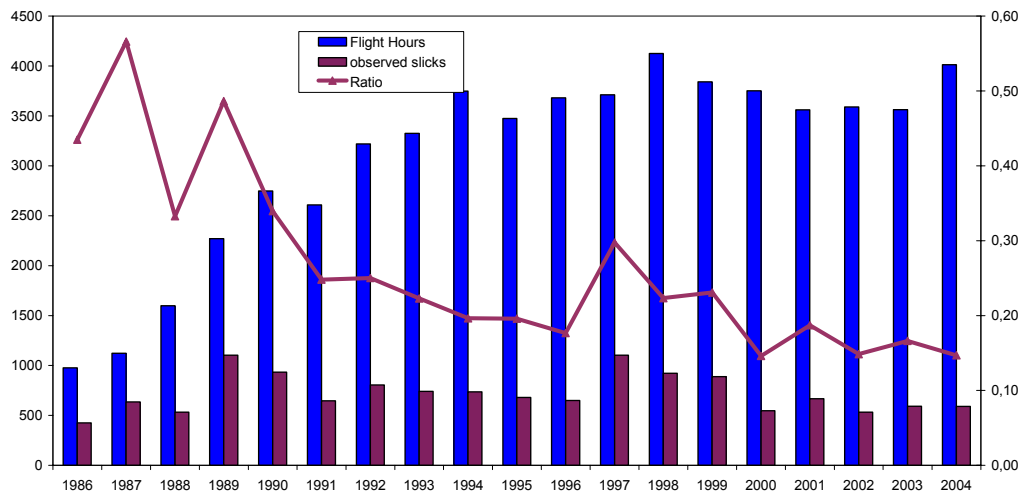


Fig. 3. Total numbers of flight hours and observed slicks for the period 1986-2004 and their ratio (Source: Bonn Agreement).

The relative diminution of the number of observed spills during the last decade is generally considered to result from the deterrent effect of aerial surveillance as well as from a greater environmental awareness of ship's crews and ship's operators encouraging them to pay more attention to observing anti-pollution regulations.

EMSA's Action Plan for Oil Pollution Preparedness and Response (EMSA, 2004), which is based on a risk assessment study carried out in 2003 by the International Tanker Owners Pollution Federation (ITOPF) at the request of the European Commission (DG TREN), presents some information on the expected evolution of the risks related to the causes of ship-sourced pollution. Most of the information combined with the assessment of the Quality Status Report (QSR) 2000 for the North Sea area (OSPAR, 2000) can be summarised as follows:

- The volume of shipping transport is expected to continue to grow significantly during the next decade in terms of increasing volumes of transported cargo, increasing number of vessels and increasing ship's sizes.
- The development of Russian oil export from ports in the Baltic is causing an important change in trading patterns for the transportation of crude and heavy fuel oils. This change will continue to increase in the coming years resulting in a significant growth of tanker traffic through the Baltic Sea and the North Sea.
- Non-tanker vessels have generalised the use of heavy fuel oil for their propulsion engine. The pollution risk posed by these vessels is in line with the increasing size of vessels and consequently the increasing size of bunkers carried on board.

This forecast indicates that the risk of pollution posed by shipping in the North Sea will continue to exist and could significantly increase during the coming years. It also points out the fact that the main threat of marine pollution is related to the increasing quantities of heavy fuel oils and hazardous and noxious substances carried on board of ships.

From a tripartite to a quadripartite zone of responsibility

The tripartite joint responsibility zone between United Kingdom, France and Belgium covers the southern part of the North Sea. It extends over the main navigation route between the Dover Strait and the mouth of the River Scheldt. As mentioned before, it is an area characterised by very dense vessel traffic, which places it in the category of zones presenting a high risk for marine pollution accidents.

The interventions of the three countries concerned in the tripartite joint responsibility zone are defined by technical arrangements between UK, France and Belgium dating from 1972. The key provision of these technical arrangements is the fact that the three countries are allowed to intervene in waters of the other countries within the boundaries of the tripartite zone without the necessity of a formal authorisation or request for assistance. These arrangements proved to work well and have been a particularly useful instrument for the joint response to the accident with the *Tricolor*. However the experience showed that pollution incidents occurring in the Tripartite zone also represent a threat for the Dutch waters and that the Netherlands should logically also be involved in the joint response to these incidents. This is the reason why – when the Contracting Parties decided in 2003 to amend the Bonn Agreement in order to realign the limits of the responsibility zones with the boundaries of the Exclusive Economic Zones (EEZ) – Belgium proposed to extend the joint responsibility zone from a tripartite to a quadripartite zone including part of the Dutch responsibility zone. All concerned countries agreed in principle on an extension to the north of the existing joint responsibility zone in such a way that the northern limit coincides with the northern edge of the Belgian EEZ (Fig. 4).

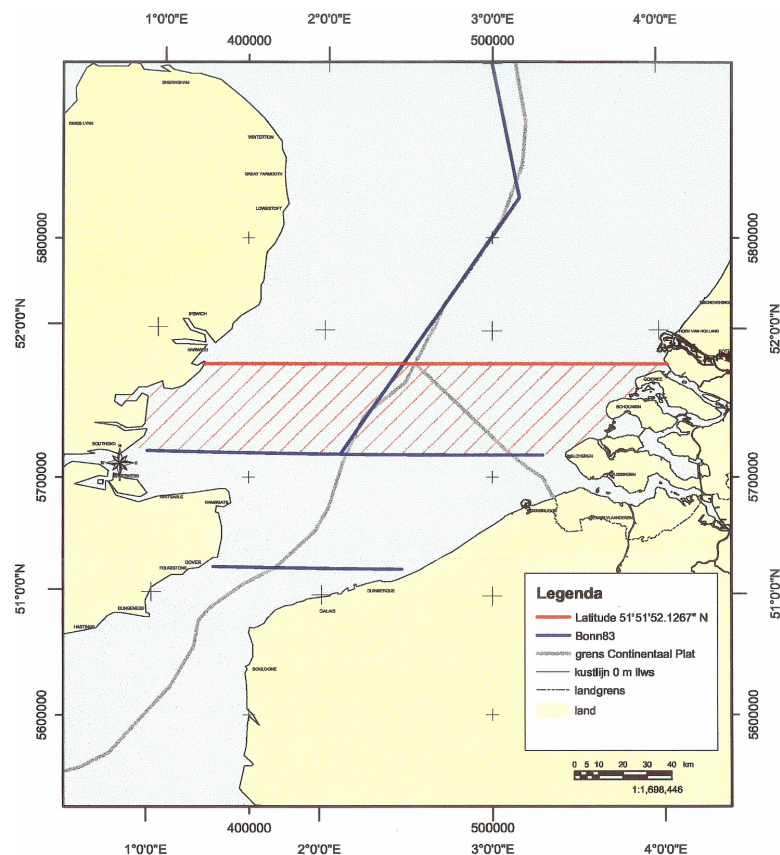


Fig. 4. Illustration of the extension to the north (shaded area) of the existing Tripartite zone to form the new Quadripartite zone of joint responsibility (Source: Rijkswaterstaat).

However, amendments to the Bonn Agreement have to go through long administrative and diplomatic processes before entering into force. Therefore Belgium proposed to the other countries concerned to already commence with the discussion for the preparation of new technical arrangements for the future Quadripartite zone before it takes effect. It is the view of the four countries that the Bonn Agreement Quadripartite zone offers interesting perspectives for a reinforced cooperation as well as for a better coordination of national strategies for marine pollution response preparedness in the southern part of the North Sea.

Conclusions

The North Sea area, and more especially the southern part of it, is a zone presenting a high risk of ship-sourced marine pollution incidents due to the very high density of vessel traffic. Despite all measures developed to improve ship and navigation safety and to enforce anti-pollution regulations, this risk will persist and may continue to increase with the predicted growth of shipping in the North Sea. The main concern for marine pollution is caused by the increasing quantities of heavy fuel oils and Hazardous and Noxious Substances (HNS) carried on board of vessels.

The Bonn Agreement offers through provisions for cooperation and mutual assistance for combating marine pollution an adequate operational framework for marine pollution response and preparedness that meets the specific needs of the North Sea countries at regional level. The experience gained by participating in the Bonn Agreement exercises and the Bonn Agreement working group places the marine pollution experts of the North Sea countries at the forefront of the knowledge and technical expertise in the field of response to marine pollution accidents.

The Bonn Agreement joint responsibility zone between United Kingdom, France and Belgium that covers the southern part of the North Sea responds to the particular needs for a reinforced cooperation in this zone confronted with a particularly high risk for marine pollution. The recently approved extension of the Tripartite zone to a Quadripartite zone including the Netherlands offers new perspectives for reinforced cooperation between the countries concerned in their common fight against marine pollution in the North Sea.

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Useful internet links

<http://www.bonnagreement.org>

<http://www.emsa.eu.int>

<http://www.ospar.org>