



**MEDITERRANEAN ACTION PLAN (MAP)
REGIONAL MARINE POLLUTION EMERGENCY RESPONSE CENTRE FOR THE
MEDITERRANEAN SEA (REMPEC)**

Second Meeting of the Mediterranean Network of
Law Enforcement Officials relating to MARPOL
within the framework of the Barcelona Convention (MENELAS)

REMPEC/WG.42/INF.8
Date: 24 November 2017

Valletta, Malta, 28-29 November 2017

Original: French

Agenda Item 3

REVIEW OF 16 YEARS OF POLLUTION REPORTS

Note by Cedre

SUMMARY

Executive Summary: This document presents a review of 16 years of pollution reports prepared by Cedre.

Action to be taken: Paragraph 3

Related documents:

Background

1 In September 1998, at the request of the French General Secretariat of the Sea (SGMer), the Centre of Documentation, Research and Experimentation on Accidental Water Pollution (Cedre) produced an annual report of maritime pollution incidents in the waters under French jurisdiction. Since then, pollution reports (POLREPs) have been systematically brought to the attention of Cedre which developed a database in 2000 to facilitate their collection and exploitation. Although annual studies have been conducted, the database had thus far never been the focus of a comprehensive statistical analysis.

2 The review of sixteen (16) years of pollution reports, which sets out a few extracts of this study, is presented in the **Annex** to the present document. Only confirmed POLREPs have been taken into consideration, i.e. detections reported by an accredited agent.

Action requested by the Meeting

3 **The Meeting is invited to take note** of the information provided in the present document.

ANNEX

Review of 16 years of pollution reports

(Cedre Information Bulletin n°36)

Review of 16 years of pollution reports

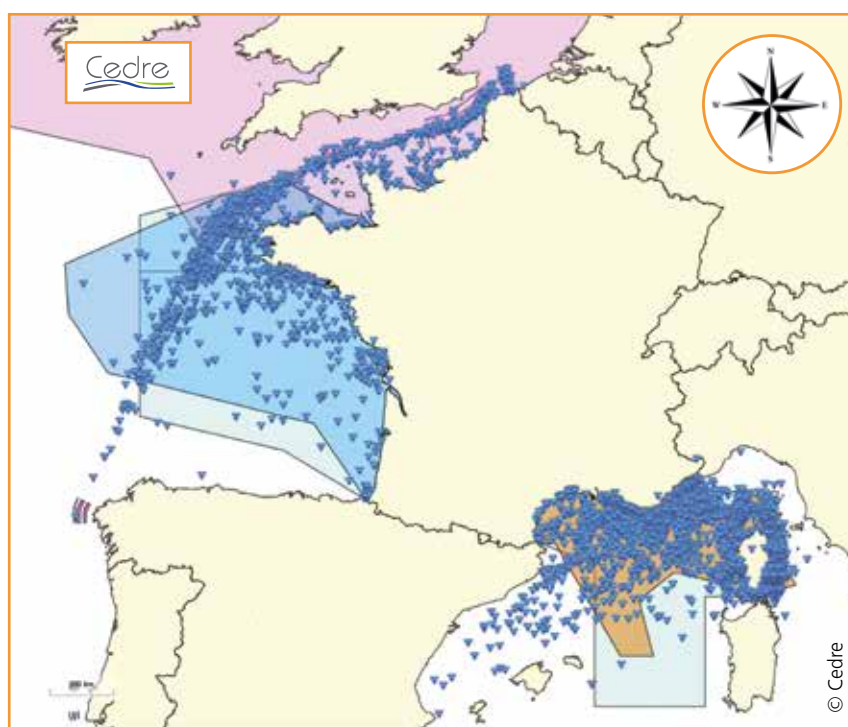
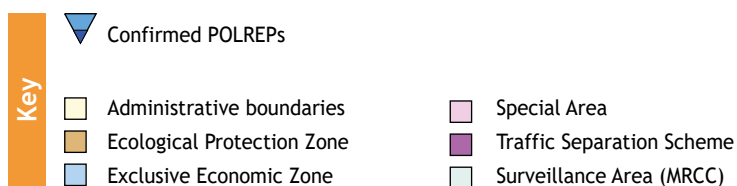
In France, pollution observations are mainly the result of surveillance from French Customs' planes, although they can also be made from civil and military planes and vessels or from the shore (semaphore towers, ports, fire brigades, military police). The data gathered is recorded in official reports known POLREPs (POLlution REPorts), drawn up by the different Maritime Rescue Coordination Centres (MRCCs).

Introduction

In September 1998, at the request of the French General Secretariat of the Sea, Cedre produced an annual report of maritime pollution incidents in the waters under French jurisdiction. Since then, POLREPs have been systematically brought to the attention of Cedre which developed a database in 2000 to facilitate their collection and exploitation. Although annual studies have been conducted, the database had thus far never been the focus of a comprehensive statistical analysis. This article presents of a few extracts of this study. Only confirmed POLREPs have been taken into consideration, i.e. detections reported by an accredited agent.

Mapping 16 years of POLREPs

The study of the POLREPs recorded from 2000 to 2015 confirms that the main areas where releases occur are along the major shipping routes: Ushant and Casquets traffic separation schemes and the routes Marseille-Corsica, Genoa-Barcelona, Genoa-Valencia, Genoa-Strait of Messina via the Corsica Channel and Genoa-Marseille.



Location of confirmed POLREPs from 2000 to 2015 in mainland France

Type of pollutant by geographical area

By studying different types of pollutant by geographical area, we learn that 80 % of confirmed chemical spills occur in the Mediterranean Sea, as do 83% of pollution incidents involving household waste, 71 % of those involving plant debris, 84 % of vegetable oil spills and 54 % of confirmed oil spills. Overall, 65 % of POLREPs in France concern the Mediterranean Sea.

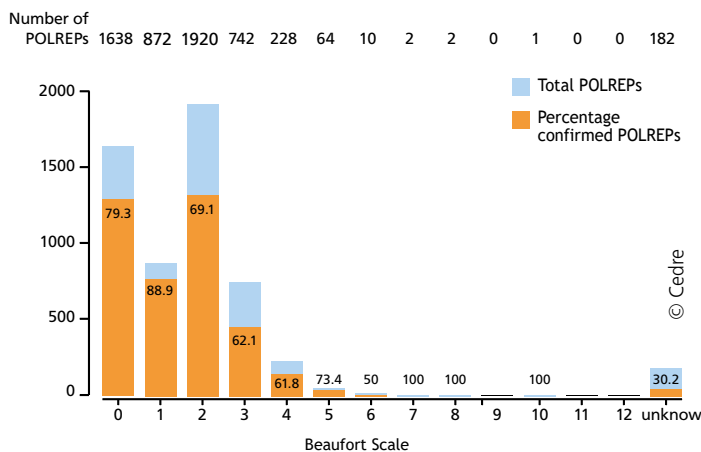
This study also revealed that 42.9 % of container losses were reported in the Western Channel (of the 15 % of confirmed POLREPs located in the Western Channel). Even although the source is not provided for any of them, we can easily suppose that they may have been lost by container ships sailing to the major commercial ports of Northern Europe, such as Amsterdam, Rotterdam or Le Havre.

Analysis according to sea state

Sea surface agitation due to the wind force is a key criterion in the reliability of POLREPs. The calmer the sea, the easier it is to detect pollution. The graph below presents the POLREP confirmation rate according to the sea state, based on the Beaufort scale. This scale ranges from 0 to 12, with 0 being a calm sea and 12 a hurricane. The share of confirmed POLREPs decreases as we move up the Beaufort scale.

However what is most evident from the figure below is the decrease in the total number of POLREPs issued as the Beaufort scale value increases. There is therefore not enough data for high wind force values to draw any conclusions on the confirmation rate in rough seas. Various hypotheses may be put forward to explain this decrease in the number of POLREPs. The most plausible are as follows:

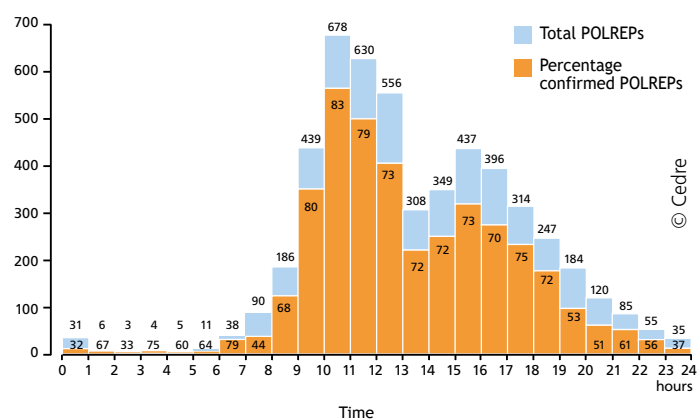
- when the sea is rough, there are just as many pollution incidents and just as much surveillance as in calm conditions, but the pollution is not as visible,
- when the sea is rough, there are fewer vessels at sea, therefore fewer potential polluters but also fewer observers.



Issue of POLREPs and confirmation rate according to sea state, from 2000 to 2015

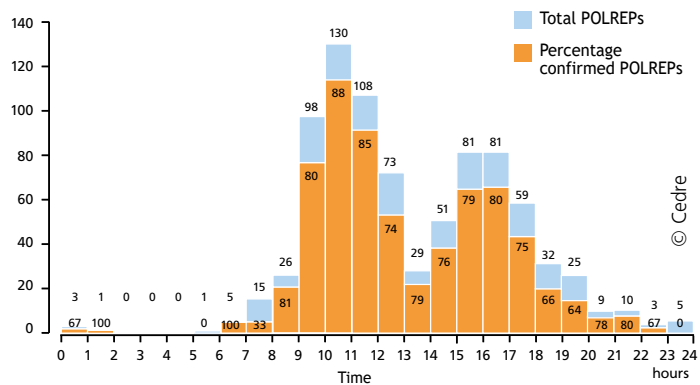
Distribution by time of detection and season

At night, it is difficult to detect pollution and this exacerbates the risk of confusion with natural phenomena. Our statistical analysis comprises both total POLREPs and confirmed POLREPs by time of detection. It only includes POLREPs for mainland France and for which the time of detection is provided. A share of the POLREPs issued at night are based on satellite observations provided by the European Maritime Safety Agency (EMSA), some of which were subsequently confirmed by further observation. The results obtained naturally depend on the quality of the data provided and the surveillance strategies implemented by the authorities in charge of aerial observation.



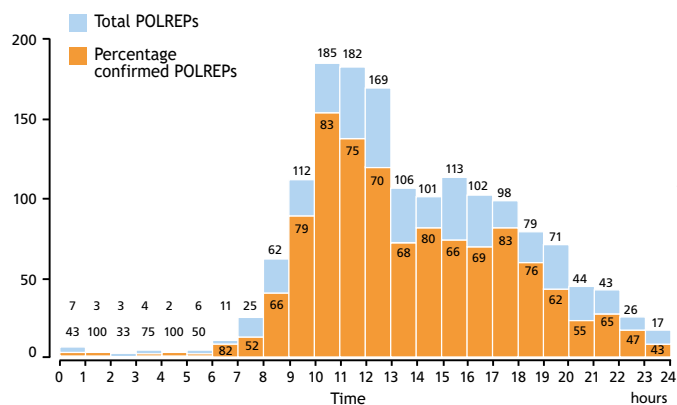
Number of POLREPs and confirmation rate by time of detection, from 2000 to 2015, in mainland France

To take this investigation further, we conducted the same analysis again, this time taking into account the season, to attempt to pinpoint any differences in detection trends between summer and winter, due in part to the numbers of daylight hours. A slight difference is clearly visible in the early morning for summer and spring POLREPs, perhaps due to discharges released during the night.

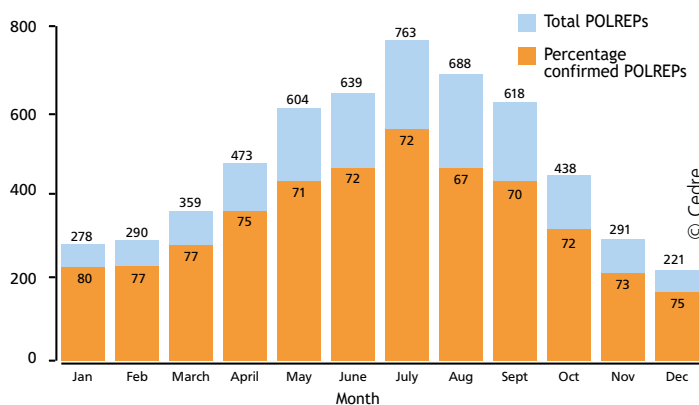


Number of POLREPs and confirmation rate by season, from 2000 to 2015, in mainland France - January to March

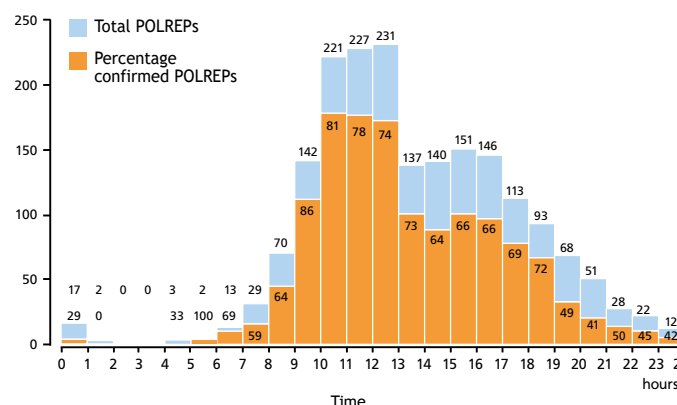
16 years of POLREPs



Number of POLREPs and confirmation rate by season, from 2000 to 2015, in mainland France - April to June



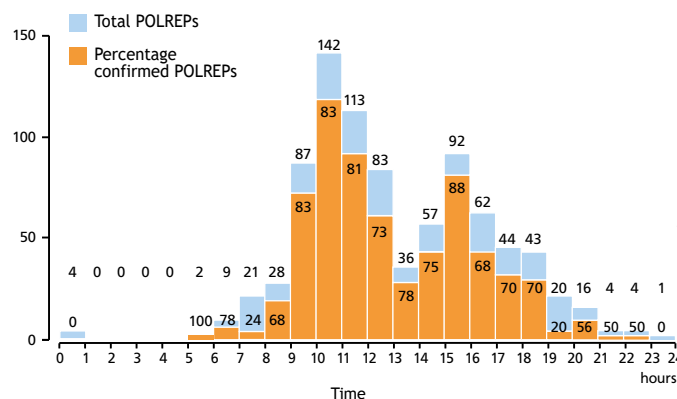
Number of POLREPs issued and confirmed by month from 2000 to 2015



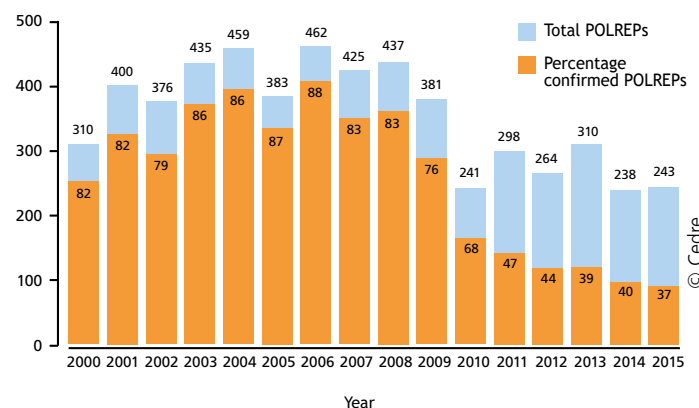
Number of POLREPs and confirmation rate by season, from 2000 to 2015, in mainland France - July to September

Conclusion

From 2010, the number of POLREPs issued and the share of confirmed POLREPs dropped sharply. Although various factors may be responsible for this slump, it is undoubtedly proof that the repression of illegal discharge is effective. The entry into force in 2009 of the French law on environmental liability, which notably introduced heavier fines for polluters (up to €15 million), contributed to this decline. This trend is also observed by the wildlife centres which collect and care for oiled birds.



Number of POLREPs and confirmation rate by season, from 2000 to 2015, in mainland France - October to December



Number of POLREPs issued and confirmed by month from 2000 to 2015

The number of detections is higher in the summer, possibly due to an influx of pleasure boaters, and therefore of polluters and potential observers. This hypothesis is supported by the fact that, from May to September, 58.3 % of the total number of detections are located in the Mediterranean, a popular tourist region, compared to 50.2 % the rest of the year. The conditions are also favourable to observation thanks to more hours of sunlight and a milder climate. The confirmation rate dips slightly in the summer months, probably due to an increased number of pollution alerts by non-specialist holidaymakers and also due to more natural phenomena such as algal blooms, which may lead to confusion.

Vincent Gouriou and Charlène Wojerz, Cedre