

INTERSPILL 2022 - Topic « Sub-sea »

Potentially polluting wrecks along the French coast

Nicolas Tamic¹, Raphaël Faschinetti² and Elsa Jantet³

¹ Cedre, 715 rue Alain Colas, Brest, France

² CEPOL, BCRM de Brest, CC79, Brest, France

³ Ministry of Ecological Transition, Tour Sequoia, La Défense, France

Contact: Nicolas.Tamic@cedre.fr

Abstract

The First and Second World Wars caused a lot of damage, among which shipwrecks are an invisible but important part, likely to have major effects on the maritime environment. According to French official sources, nearly 5,000 ships sank during these two conflicts. Most of them lie in the Channel, the North Sea and the Atlantic. Many of these ships used heavy fuel oil for their propulsion and could carry ammunition for their offensive missions or to support the fighting units. Over the years, these wrecks have thus become potential sources of pollution.

It is in this context that Cedre conducted two studies in 2000 and 2009 to identify potentially polluting wrecks off the French coast. This inventory enabled a list of some sixty potentially dangerous wrecks to be drawn up.

Twenty years later, it seemed worthwhile to update this list and to compare it with environmental changes, while taking into account the impact of the corrosion of the last eighty years on the wreck structures.

This update is all the more important as it is part of the implementation of the European marine strategy framework directive (MSFD). This directive aims to protect more effectively the marine environment in Europe. It is based on the concept of good environmental status of waters. The MSFD defines the latter as a good functioning of ecosystems (at the biological, physical, chemical and sanitary levels) allowing a sustainable use of the marine environment. Eleven qualitative descriptors, common to all European Union Member States, are used to define this good environmental status, including descriptor 8 (D8) which concerns the level of concentration of contaminants in the marine environment.

Collaboration between several French partners has made it possible to propose a new approach to identify and map wrecks at risk in French waters.

The methodology used was based on previous work conducted by Cedre in the field of potentially polluting shipwrecks, in particular its 2000 study and its involvement in the European DEEP project (Development of European guidelines for Potentially Polluting shipwrecks), the conclusions of which were used as a basis for the study conducted in 2009 for the French Navy for the Channel - North Sea. It has added new data and additional bibliographic resources.

Four parameters were taken into account to create a risk analysis matrix: the volume of pollutant (or its estimation according to the ship's voyage), the distance of the wreck from a sensitive area or coastline, the nature of the pollutant

(fuel oil diesel, HFO, CTL), the time elapsed since the wreck. A severity factor was assigned to each parameter. By cross-referencing all the data, an objective risk analysis was obtained, classifying the wrecks according to three levels of risk: serious, moderate and minor. In addition, two intermediate levels were established (minor to moderate risk and moderate to serious risk) taking into account the extreme values surrounding the minor and moderate risks.

The objective assessment of the risk does not seem to be a good element for the assessment of the danger because it leads to having a state of the situation which does not take into account the exogenous elements surrounding the wreck. However, these external data may be of some importance from the point of view of the public authority. Thus, a recent wreck with a low objective risk factor (little residual pollutant on board and position well off the coast) may nevertheless represent for the authority a particular attention in view of the environmental sensitivity linked to the wreck. Public emotion, the media context and the socio-economic consequences of a recent shipwreck may force the public authority to ensure reinforced surveillance of a wreck. In such a case, the maritime authority must have a tool allowing it to influence the objective rating resulting from the risk analysis in order to artificially raise the risk factor with the aim of increasing the surveillance of the wreck by the means of the maritime surveillance action. It was therefore decided to add to the objective risk scale a coefficient of appreciation by the French government, which aims to reduce the risk, to accept it or to increase it.

This allows a wreck to be "tipped" into another category than the one determined objectively.

The updated list of wrecks will be made available to the French government services in the framework of their aerial and maritime surveillance missions of the French approaches. To this end, an online portal is being created. It is based on a mapping tool integrating on the one hand the list of potentially polluting wrecks and on the other hand the POLREPs issued by the State services and the CleanSeanNet system. Thus, before a surveillance mission, a State aircraft or ship commander will be able to plan his surveillance mission according to the data made available to him. This portal will be used as a tactical and operational tool to detect as soon as possible oil leaks trapped in wrecks classified as potentially polluting. A periodic update of the listing will be carried out every five years in order to take into account the environmental and structural modifications of the wrecks, in particular with regard to their ageing.
