

# **ATELIER INTERNATIONAL**

## **Les enjeux des états de référence du littoral**

### **Methods for assessing oil spill impact on the marine environment – an international perspective**

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#### **ABSTRACT**

Studies of oil spill effects on the marine environment serve several purposes, including academic research, evidence to support punitive measures, environmental conservation and compensation for economic loss. The focus of this presentation is on the latter, given that an elaborate system has evolved for dealing with the economic and environmental consequences of accidental spills of oil and chemicals from ships. The main principles and key elements of the international compensation schemes are described. Since relatively little is known about specific impact of chemicals, most of the experience we have to draw upon concerns spills of petroleum hydrocarbons. Reference to some recent shipping incidents demonstrate how the application of scientific methods for assessing damage helps to maintain a consistent approach to the implementation of relevant maritime legislation. These cases cover a range of political and cultural settings and serve to identify and assess damage against the background of a complex and highly variable marine environment.

The methods available for assessing oil spill impact and their effectiveness are closely related to the passage of time between the pollution event and the sampling programme. Compromises between conflicting ideals characterise the appointment of researchers and institutions, the selection of data points, the use of control measurements and the interpretation of results.

Given the wide variety of potential impact on the marine environment, it is clear that the implications of oil spills for both risk perception and formulating policy for preparedness can be difficult to balance amongst other conflicting requirements. As a generalisation, pollutants such as oil, heavy metals, persistent organic substances and radionuclides are perceived as less significant compared with other agents of environmental deterioration, and create few long-term problems. Instead, the focus of concern is centred more on the threat of climate change and the greater effects of sewage, eutrophication, declining fish stocks, and habitat destruction.

As long as there is a mismatch between public perception and scientific reality regarding pollution there is a risk of political interference in decision-making. Spill response decisions, including post-spills studies, should be based on a technical and science-based appreciation of the issues. Common sense suggests that activities posing the greatest risk to the environment should attract the most attention. The media, governments, special interest groups and scientific organisations have a responsibility, as well as an opportunity, to provide reliable public information and education about marine and other environmental issues, thereby enabling the public to assess the relative significance of problems and threats.