

## N° 311 E – News from April 2022

### Emergency response

In April, Cedre's duty team was contacted several times. Our duty engineer was contacted by the Loire-Atlantique Operational Fire and Rescue Centre (CODIS 44) with questions relating to a heavy fuel oil spill in a market garden. **BMPM** sought information on suitable collection techniques for invasive algae. The ICE centre in the Czech Republic called Cedre as part of an exercise to obtain information on liquefied chlorine gas. Advice was requested by the civil protection department (SIDPC) of the **Var authorities** and the Prevention department of the **Métropole Toulon Provence Méditerranée** on spill response measures deployed following a fire onboard a yacht and its subsequent sinking in the port of Saint-Mandrier. **MRCC MED in Corsica** contacted the Response Department to request advice following a suspected spill observed from a semaphore. **MRCC Réunion** alerted the duty engineer following the observation of a suspected illegal discharge by a ship off Tromelin Island. Finally, a private company contacted Cedre following a spill of pyrolysis oil into the natural environment.

### In short

**Cedre Information Day** on 29th March on the consideration of environmental impacts: the videos of the 11 conferences are now **online on our Youtube channel!**

#### Dates for the diary

- ▶ 25 May: **POLMAR-Terre** annual event
- ▶ 1<sup>st</sup> June: 55<sup>th</sup> Cedre Strategy Committee meeting, at **IMT Mines Alès**
- ▶ 14th June: Meeting of Cedre's Board of Governors

#### Visits and presentations

- ▶ 11th May: Visit to Cedre from the Secretary General for the Sea, Mr Denis Robin, and the Water and Biodiversity Director, Mr Olivier Thibault

#### Other upcoming events

- ▶ IOSSC 2022: International Oil Spill Science Conference 2022. 4th to 7th October 2022 in Halifax, Canada. **Call for abstracts and registration now open!**

### IMAROS project: ecotoxicity, persistence and in situ burning tests

Three very low sulphur fuel oils (VLSFO), including that from the *Wakashio* which sank in Mauritius in 2020, were studied at Cedre as part of the **European project IMAROS**, whose experimental phase has just been completed. This project brings together partners from 6 different countries and aims to obtain a better understanding of the characteristics and behaviour of these new generation fuel oils with a view to developing operational spill response recommendations. The potential impacts were assessed through ecotoxicity tests on algae (*Phaeodactylum tricorutum*), copepods (*Acartia tonsa*) and amphipods (*Corophium volutator*). Comparative substrate cleaning tests (with the 3 VLSFOs and a conventional heavy fuel oil) were conducted using the clean-up test bench, an automated device developed by Cedre. Finally, the burn test bench was used to determine whether this technique could be applied with these products containing highly variable proportions of light fractions.

### Theory and practical training for offshore wind energy providers

As part of their activities for the development of the **Banc de Guérande** wind farm in Saint-Nazaire, some of the subcontractors involved called upon Cedre for spill response training in English. The aim of this training was to provide participants with an opportunity to discuss the organisational and operational recommendations for spill response during the phases when power is temporarily supplied to the wind turbines by generators. A one-day theory and practical training course was thus run for a dozen or so trainees. The course aimed to upgrade the skills of these operators, who were keen to be better prepared to deal with possible incidents. The goal was to raise awareness of oil spill response among these key players. Following theory lessons on the behaviour of the oil handled at the offshore wind farm and on spill response techniques, practical sessions were run at Cedre's technical facilities involving the deployment of response equipment in real conditions. Through exercises simulating light oil spills, the trainees had the chance to familiarise themselves with the initial response measures and equipment to be used in the event of a spill in a port or offshore. This was a first for our team and it proved to be thoroughly successful according to the feedback from our trainees. It is due to be followed up by further actions; our teams are already working on a standard training course for MRE and offshore wind energy players!

## OPHELIA project wrap-up meeting and results

On 28th April, the wrap-up meeting for the OPHELIA project (Oil Pollution characterization using HypErspectral ImAgery) was held at CNES in Toulouse. The objective of this project was to investigate the potential of hyperspectral imagery to characterise oil pollution in order to provide a complementary capability to existing early warning services for oil pollution at sea using satellite imagery. Three noteworthy outputs are: the definition of a colour code consistent with the Bonn Agreement Oil Appearance Code that can be used to classify polluted areas by thickness range; a module that allows users to easily estimate the quantities of oil at the water surface; and a processing module capable of determining the emulsion ratio of the slick, providing an indication of the degree of weathering of the oil at sea. However, certain limitations have become apparent and will need to be addressed in order for the modules to be fully operational, for example the minimum slick thickness (below 50 µm the slick is not detected by satellite), the sunglint effect which tends to cause the slick thickness to be overestimated, and the turbidity of the water which can affect the detection of thin layers of oil.

## 1st English-language course on oil spill response at sea and on the shoreline

A session of our "Sea and Shoreline" oil spill response training course was organised on our premises for English-speaking participants consisting of representatives of the Maritime and Coastguard Agency (MCA) and TotalEnergies. The theory and practical programme meets IMO 2 standards. During the post-training evaluation phase, the participants provided enthusiastic feedback, emphasising the quality of the training during the lectures, tutorials and practical sessions, which involved real oil released in our test tank, on our man-made beach, on pebbles, riprap, etc. At the end of this session, the participants and trainers mentioned various opportunities for cross-Channel collaboration, a sign of the internationalisation of our standard training courses.

## Participation in a Franco-American summit on plastic pollution

On 5th and 6th April, Cedre was in New York to take part in an international summit on plastic pollution, jointly organised by the Embassy of France in the United States, the Global Council for Science and the Environment and Long Island University. The aim of the summit was to share knowledge and strengthen Franco-American collaboration to help curb plastic pollution. We presented the marine litter monitoring actions implemented in France and Europe within the framework of the MSFD and the OSPAR Convention, as well as the collaborative project that we carried out with The Citadel (Charleston, South Carolina). This project aimed to compare beach pollution on both sides of the North East Atlantic, on the French and American coasts, using the OSPAR methodology. The results showed differences in pollution levels and composition as well as the existence of transboundary transfers. They confirm that it would be worthwhile setting up large-scale monitoring programmes to help curb marine litter.

## Cedre trains TotalEnergies Gabon

Cedre is a longstanding spill response training provider for TotalEnergies. In April, the group's Gabonese Exploration Production subsidiary asked our teams to run an IMO 2 course for its offshore and on-shore personnel. The theory part was conducted remotely via our new interactive screen featuring webconferencing tools. The practical part took place on 28th and 29th April in Port Gentil. The practical sessions involved: boom deployment and recovery at sea, shoreline surveys, shoreline clean-up techniques, the production of custom-made booms, the organisation and set-up of a beach clean-up site. A sorbents demonstration was also organised at the Hydro Oil & Gas Training facility a few kilometres from Cape Lopez. The session ended with a tabletop incident management exercise, in which trainees were able to apply the knowledge acquired throughout the week. During the post-training evaluation phase, the trainees expressed their satisfaction with the training and the professionalism of our trainers.

## Visit to Edouard Quéau secondary school, Portsall

As part of the Educational Managed Marine Area in which Edouard Quéau secondary school (Portsall, Finistère) is involved, Cedre accompanied pupils to launch the monitoring of macro-litter, meso-litter and large micro-plastics washed up on the shoreline at the Kerdéniel site, the pilot site within the Educational Managed Marine Area. This visit provided the opportunity to present and discuss the issue of aquatic litter, to carry out participatory workshops, to train pupils and field supervisors in the different monitoring protocols and to take several samples which were taken back to Cedre for analysis.

## Cedre's activities relating to national litter monitoring networks

During the second sampling season for the monitoring networks, Cedre travelled to different geographical areas in order to carry out several missions, either for sampling or to meet and support operators. On 15th April, Cedre travelled to the Crozon peninsula to meet members of the Iroise Marine Nature Park (PNMI) as well as members of EPAB (Établissement public de gestion et d'aménagement de la baie de Douarnenez) and the association Ystopia to present the monitoring networks and to train them in the new protocol for the national monitoring network for macro-litter washed up on the shoreline (RNS-mP-P). Then, on 21st April, accompanied by the Water and Biodiversity Directorate under the Ministry of Ecological Transition (MTE), Cedre travelled to the Bay of Audierne to collect litter at the Stang site, in Saint-Jean-Trolimon, applying the meso- and macro-litter and large microplastic protocols on the beach. Cedre also travelled to the Mediterranean, from 25th to 29th April, to meet staff from the Gulf of Lion Marine Nature Park, CEFREM (Centre of Education and Research on Mediterranean Environments), the Camargue Regional Nature Park

and [CPIE Bassin de Thau](#). The Marine Nature Park staff were trained in the different monitoring protocols. Several samples were also taken and brought back to Cedre for analysis. This visit was also an opportunity to prospect sites and conduct site surveys for the national monitoring network for litter from drainage basins.

## News of the MANIFESTS project

As part of the [MANIFESTS project](#), Cedre visited the [Royal Belgian Institute of Natural Sciences \(RBINS\)](#) in Brussels on 5th, 6th and 7th April in order to discuss forecast models for pollutant upwelling in the water column, surface drift and evaporation. These discussions focused in particular on the experimental results obtained during tests in the Cedre Experimentation Column (CEC) and the C<sup>3</sup> Column (Counter-Current Column) which aimed to describe the dissolution of chemicals as they rose through a water column. A correlation between drop size and interfacial tension was sought so that the computer model would take account of this parameter, which appears to be of primary importance.

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