

N° 297 E – News from January 2021

Emergency response

Following a leak from a pipe between the **Total** refinery in Donges and one of its oil terminals, Cedre was called on by **DREAL Pays-de-la-Loire** to provide advice on the response system implemented for the Loire river. Cedre was also contacted in relation to suspected oil pollution on Saint-Cast-le-Guildo beach (Côtes-d'Armor). After receiving samples, the substance was rapidly identified as peat. Following the pollution of the river La Douze, caused by a spill of waste oil in Mauvezin, we received a call from the **DDTM** for the Landes area to obtain advice on the response operations to be implemented. We also received an enquiry into the behaviour of rapeseed oil at sea. Discussions were held with the **DDTM** for Gironde as well as the municipality of Gauriac in relation to the sunken wreck of the *Frisco* in the Gironde estuary. The Port of Roscoff contacted us after a greenish slick was observed in the port waters, most likely due to hydraulic oil. Finally, we received oiled bird feathers, found on the shores of the Morbihan area, for analysis.

Cedre Information Day 2021 on containers to be held virtually

After being postponed last year due to measures relating to the COVID-19 pandemic, the Cedre Information Day will be held on 23rd March as a virtual conference. The various speakers will present remotely, and question and answer sessions will be organised so that attendees can interact with them. Simultaneous translation into English will be provided in an English language virtual conference room for all the presentations.

Nanoplastics project comes to a close

At the very end of January, two agents from Cedre took part in the wrap-up meeting of the **ANR-funded Nanoplastics** project. The project, launched in 2016, brought together several partners (**Ifremer**, **IUEM**, **UBO**, **Université du Mans**, **ANSES** and Cedre) to focus on the issue of the fragmentation of microplastics (< 5 mm) into nanoplastics (< 100 nm) and the related impacts on the marine environment. This final meeting was the opportunity to review the advances made through the project as well as the bottlenecks and difficulties encountered by the different teams. Among the results, we note the data relating to microplastic contamination in Brest's roadstead which showed plastic sedimentation despite densities lower than that of seawater. The study of the biofouling of these plastics by algae and bacteria also pointed to the influence of the type of polymers. For Cedre, this project provided the chance to develop our skills in the analysis of pollutants adsorbed onto and contained in microplastics (environmental pollutants and additives). Through the work conducted on a plastic additive used as an antioxidant (Irgafos 168®), we were able, together with the project partners, to demonstrate the difficulty in working on this type of molecule due to the very high levels of contamination that can be found in laboratories (for further information see the [article by Hermabessière et al, 2020](#), published within the scope of the project).

Fuel sample study for IMAROS project

IMAROS (*Improving response capacities and understanding the environmental impacts of new generation low sulphur MARine fuel Oil Spills*) is a two-year European project co-funded by the **European Union Civil Protection Mechanisms (EU/DG-ECHO)** that involves 6 partners and aims to pool the knowledge and experience of different Member States. This study aims in particular to obtain several samples of low sulphur marine fuel oils and to assess their behaviour when spilled in the marine environment (Work Package 3) as well as the effectiveness of different response techniques (WP4). As leader of WP3, Cedre obtained 13 samples which were the focus of a laboratory-scale study that has just been completed. Based on these results, the next step will consist in selecting, together with the other project partners, certain fuel oils whose behaviour will be studied at pilot-scale (WP3), in connection with the effectiveness of the response techniques identified in WP4 (containment/recovery, dispersants, in situ burning, etc.).

Cedre Information Day: Thursday 23 March 2021

“Containers” Virtual event

Access the [detailed programme](#),
and the [registration form](#).

Registration free, places limited.

In short

Dates for the diary

► 8th to 11th February: Cedre will be taking part in the **Rencontres du GDR Polymères et Océans 2021**

► 11th and 12th February: Cedre will be taking part in the Annual European Coast Guard Functions Forum

Training

► 1st to 3rd February: spill response training and exercise at Rouen's seaport

Study on the at-sea behaviour of paraffins and palm oil

Within the context of monitoring the behaviour of paraffins and palm oil at sea, this month Cedre launched an experiment designed to study their fragmentation when washed up on the shoreline. This study is conducted using the shoreline test bench which recreates identical agitation conditions in twelve 24-litre tanks. In each of the tanks, balls of 3 paraffins of different grades (1 food grade, 2 semi-refined) and one palm oil were deposited on beds of sand of different grain sizes (fine-grain, medium-grain and coarse-grain sand). The aim is to study the gradual fragmentation of these balls, i.e. their mechanical abrasion, according to the grain size of the sand. This phenomenon will be monitored by weighing each ball on a weekly basis, then, at the end of the experiment, a sediment analysis will be conducted to determine whether the risks of particles of paraffin and vegetable oil being buried require consideration.

Training: first on-site course of 2021 at Cedre!

The second 2020 session of the aerial observation course postponed due to COVID-19 related measures in place in France at the end of last year was held from 25 to 28 January 2021. 12 participants enrolled by the **French Navy** thus benefited from the experience of the different trainers in the field of marine pollution observation. The participants were trained in observing different types of pollution and recording the relevant information in the POLREP, a document containing essential information required by decision-makers and to support spill response operations at sea. The trainees also furthered their technical and legal knowledge on drawing up an official report and gathering evidence in the case of observations of illegal discharge. This course, as usual very lively, also offered participants the opportunity to meet the public prosecutor of Brest's high court. With this session, we were delighted to resume our on-site training courses!

Training courses for ports

On the 18th, an engineer and a trainer from Cedre ran a training module, on behalf of **CNFPT**, on accidental water pollution as part of a course for port supervisors. As a follow-up to a visit to Sablons marina as part of a study for the **Region of Brittany** and to various discussions with the port authority, a trainer from Cedre travelled to Saint-Malo to run a training session, on the 19th, at Sablons marina, for a group of 10 participants. The aim of this session was to raise awareness of spill response in ports among harbour personnel (director, technical manager, harbour master, port agents, reception staff, etc.).

Quebec online training course

Through interactions with **CEGRIM**, Cedre was asked to give a lecture as part of a training course on emergency response to a maritime incident organised by **BCU (Quebec environment ministry)**, for **Urgence-Environnement** personnel. This was the opportunity for two of our engineers to share their experience through 3 events involving oil or chemicals: the pollution of the Loire estuary in 2008, the **Ece** incident in 2006 and the collision between the **Ulysse** and the **CSL Virginia** in 2018. As this was an online course, we were also able to attend certain modules, affording us a fuller understanding of the spill response context in Quebec.

Training on the microplastics analysis programme POSEIDON

On 12th and 13th, Cedre attended a training session in Lorient on the microplastics analysis support programme. The POSEIDON programme (*Plastic pOllutionS Extraction, DetectiOn and aNalysis*) developed by researchers and engineers at the Institut de Recherche Dupuy de Lôme (IRD, **Université Bretagne Sud**) focuses on automating the analysis of polymer spectra obtained by Fourier-Transform Infrared Analyser (FTIR) through machine learning processes. The aim of this course was to reinforce our analytical skills for the **MSFD** monitoring programme, led by Cedre, for microplastics in beach sediment. POSEIDON should facilitate our work on the identification and characterisation of the chemical nature of microplastics after their analysis by FTIR. This training session was also the opportunity for us to dialogue with our partners at IDRL on analysis methods for microplastics in the marine environment.

OceanWise project: 6th coordination meeting

The partners of the **European project OceanWise** met virtually on 12th and 13th January for the sixth project coordination meeting. OceanWise, led by the **Portuguese Directorate-General for Natural Resources, Safety and Maritime Services (DGRM)** and involving 13 partners (Irish, British, French, Spanish and Portuguese), aims to develop concrete solutions, based on resource-efficiency, circular economy and participatory methods, to reduce the impact of expanded and extruded polystyrene (EPS/XPS) in the marine environment in the north-east Atlantic area. This meeting was the opportunity to review the project's progress as it enters its final year. The discussions focused in particular on the knowledge acquired on the production and use of EPS/XPS in Europe, the assessment of their impacts, research into pre-existing alternatives, the running of participatory workshops in the five partner countries as well as the evaluation of potential solutions which could be developed. #BeOceanWise: to find out more, check out the **project newsletter**.