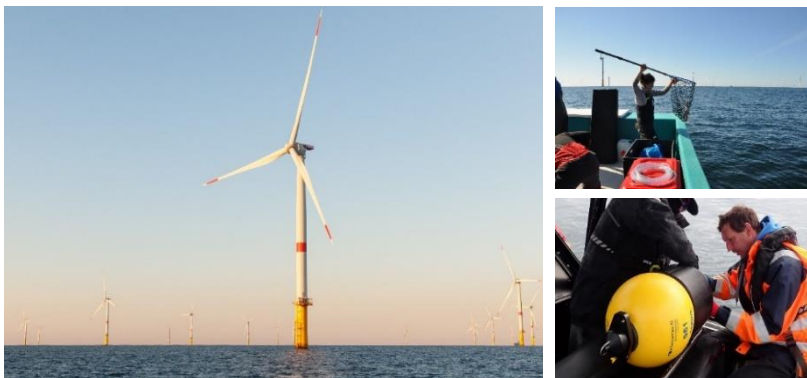


## PRESS RELEASE | 12 janvier 2023

### How do fish and crustaceans visit offshore wind farms?

France Energies Marines is currently monitoring fish and crustaceans at offshore wind farm sites in the Channel, Atlantic and Mediterranean. The movements of several hundred tagged individuals are recorded using an acoustic telemetry network deployed as part of the [FISH INTEL](#) and [FISHOWF](#) projects. The deployment of this technology on a large scale in operational or under construction offshore wind farms is a first and has been made possible thanks to close collaboration with many partners. The data collected will help to identify important habitats in these high-stake areas and to better assess the potential effects of the farms on fish and shellfish populations.



*Legend: Saint-Nazaire wind farm and release of a tagged individual in the wind farm (left and top right), deployment of an acoustic telemetry receiver in the wind farm off Saint-Brieuc (bottom right).*

*Credit: France Energies Marines*

Sea bass, pollack, crawfish, lobster and several species of rays and sharks are currently being monitored by acoustic telemetry at offshore wind farm sites. This research effort is being conducted within the framework of the FISH INTEL cross-Channel Interreg project and the FISHOWF project by France Energies Marines in close collaboration with the partners involved (see below). Each fish or crustacean tracked is equipped with a tag emitting a unique acoustic signature. This signal is identified and recorded by a receiver when the fish or crustacean passes near the device. Thanks to a network of receivers, it is thus possible to reconstruct the trajectories of individuals. Known as acoustic telemetry, this technique is increasingly used to effectively track the movements of mobile marine organisms.

#### Unprecedented research in offshore wind farms

Since the spring of 2022, about forty acoustic receivers have been deployed at the offshore wind farms located off Saint-Brieuc (under construction), Courseulles-sur-Mer (under construction) and Saint-Nazaire (in operation) with the collaboration of Ailes Marines, EDF Renouvelables and the fisheries committees of the Côtes d'Armor, Normandie and Pays de Loire. This is the first time in France that an operational acoustic telemetry network of this scale has been deployed in an open coastal environment in marine renewable energy zones. Ifremer and France Energies Marines (with the support of the French National Museum of Natural History and the APECS Association) have carried

out a major tagging effort and around ten species are currently being monitored, including species of rays and sharks that have been little studied to date. Placed underwater, the receivers can detect and record the movements of all of the 400 fish and several dozen crawfish and lobsters that have been tagged so far. After 5 months of recording, a first maintenance operation of the receivers was carried out at sea to recover the data stored in each device. The data already show numerous detections and are currently being analysed. The data will be used to identify important habitats and understand how fish and crustaceans visit and use offshore wind farms under construction or in operation, thus providing a comprehensive baseline knowledge to better understand the effects of wind farms on mobile marine species.

#### **FISH INTEL**

- 16 receivers deployed in the Saint-Brieuc offshore wind farm.
- 9 receivers deployed in the Calvados offshore wind farm off Courseulles-sur-Mer.
- More than 300 fish (sea bass and pollack) and 50 lobsters tagged in France.

Learn more (in French): <https://www.ifremer.fr/sites/default/files/2022-11/cp-fishintel.pdf>

#### **FISHOWF**

- 17 receivers deployed in the Saint-Nazaire wind farm.
- 3 receivers on observation buoys, including 2 in the Mediterranean
- More than 160 tagged individuals, including lobster and species of rays and sharks that are still poorly known, lesser and greater spotted dogfish, starry smooth-hound, thornback rays, undulate rays, porbeagle sharks, blue sharks

#### **Sea bass and blue sharks monitored in the Mediterranean**

In the Mediterranean, where floating wind farm projects are planned, two marine environment observation buoys have been equipped with acoustic telemetry receivers as part of the FISHOWF project: the BoB buoy, located off Leucate, and the MEMOFLOW buoy, located on the MISTRAL test site off Port-Saint-Louis-du-Rhône. In association with the CONNECT-MED and RES-MED telemetry networks deployed along the Gulf of Lion, these buoys aim to record the movements of several highly mobile fish species such as sea bass and blue shark. The data collected will help to better understand the influence of floating structures on the behaviour of pelagic species moving between the surface and the bottom.

*"France Energies Marines and the partners of the FISH INTEL and FISHOWF projects have set up an ambitious observation and research infrastructure: a network of acoustic telemetry receivers that will provide a better understanding of how different marine species frequent offshore wind farms, says Lydie Couturier, Research Fellow in Marine Ecosystems and ORE Interactions at France Energies Marines. By monitoring over the long-term species with different movement patterns (sedentary, mobile, migratory) and different degrees of sensitivity to electromagnetic fields, we will be able to better assess the effects of offshore wind farms on fish and crustacean populations."*

## FISH INTEL's partners

This project is led by the University of Plymouth.



⇒ See the [project webpage](#)

**Duration:** 24 months (2021-2023)

*The total budget of the project is €4.1 million, of which €2.8 million is funded by the European Regional Development Fund through the Interreg France (Channel) England programme.*

## FISHOWF's partners

This project is led by France Energies Marines.



⇒ See the [project webpage](#)

**Duration:** 36 months (2021-2024)

*The total budget of the project is €2363K. This project is funded by France Energies Marines, its members and partners, as well as by the French government under the "Investissements d'Avenir" programme. It also benefits from the financial support of the University of Western Brittany and the Provence-Alpes-Côte d'Azur and Brittany regions.*

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