

Plan to search for oil off Balearics in hot water over fish fears

Source: Thomson Reuters Foundation - Sun, 25 Jan 2015 10:33 AM

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TORONTO, Jan 25 (Thomson Reuters Foundation) - Opponents of a British company's plan to test for oil deposits off the coast of Spain's Balearic Islands are on tenterhooks ahead of an environmental impact declaration expected soon from the government.

Scottish firm Cairn Energy has made an application to carry out seismic surveying in the waters off the Mediterranean resort islands of Ibiza and Formentera.

The procedure uses air guns to test for hydrocarbons along the ocean floor - a method that critics argue could deplete fish stocks.

Meanwhile, 117,000 citizens - more than 10 percent of the population of the Balearics, which also include Mallorca and Menorca - have written letters to register complaints against Cairn's plan with the Spanish government. On Ibiza, banners

saying “no to oil prospecting” festoon buildings.

Nicolas Vallespir, who has fished in the waters off the Balearics for 10 years, worries that oil exploration will harm his livelihood.

"The way they want to find the oil is with these seismic guns - that is going to destroy the eggs of the fish," he told the Thomson Reuters Foundation. "If there are no fish, we will not have any money to pay the bills."

The **International Ocean Noise Coalition**, a group of 150 NGOs, compiled three decades of scientific studies, exploring the effects of anthropogenic noise for marine life and fisheries. Where seismic surveys occurred, fish populations declined by 40 to 80 percent, it found.

Spain is one of the biggest producers and consumers of fish in the European Union. The sector accounts for close to 1.5 percent of Spain's gross domestic product, rising to 10 percent in parts that depend on it heavily.

In 2009-2011, fishing brought in net income of around 10 million euros a year to the Balearic Islands, which had close to 400 registered fishing vessels.

DECISION IMMINENT

In 2012, Cairn Energy requested permission to carry out surveys to obtain 3D seismic data in the Gulf of Valencia, off Ibiza and Formentera, as the first stage of a hydrocarbons research permit granted by the Spanish government in 2011.

On its website, the company says it **minimises the noise** from seismic surveys by using a process called “soft start”, in which the power of acoustic sources is slowly increased, giving marine mammals time to leave the area before the maximum level is reached.

Cairn Energy is still waiting to receive an Environmental Impact Declaration from Spain's Ministry of Environment, which is expected to be published in a few weeks' time, according to environmental consultant Carlos Bravo, who also works with opposition group **Alianza Mar Blava** (Blue Sea Alliance).

If the declaration is negative, the project will be cancelled. If it is positive, Cairn Energy will have the green light to begin seismic surveying in the area.

Last November, the Spanish government denied permission for oil exploration in the Alboran Sea between the coasts of Spain and Morocco, due to its potential impact on the Cuvier's beaked whale.

And this month, green groups and local leaders in the Canary Islands welcomed a decision by energy giant Repsol to **abandon its search for oil** and gas 50km offshore because the deposits it had found were too small.

NOISE NUISANCE

In seismic surveys, air guns shoot sharp sound frequencies into the ocean floor, which penetrate more than 6,000 metres (20,000 feet) below the seabed.

The "shots" go off every 10 to 12 seconds around the clock, often for up to months on end. They create an echo that is recorded and heads back up to the surface.

Sound travels efficiently underwater - four to five times faster than in the air - so the "leftover" noise can make its way thousands of kilometres across the ocean floor.

A growing body of scientific evidence points to changes in communication and feeding patterns among marine life due to this technique, as they rely on sound waves for activities like mating, according to the St. Lawrence Coalition, a partnership of environmental groups calling for a moratorium on hydrocarbon exploration in Canada's Gulf of St. Lawrence.

In June 2014, the coalition released a report on the biological impacts of seismic surveys on marine life. It found changes to organisms' physical state, biological function and how they act.

Sound waves from air guns were found to destroy eggs, and to deform or delay the development of larvae, while fish and other marine species left the affected area.

A 1993 study by the Norwegian Institute of Marine Research reported declines in trawl catch rates of 45 to 70 percent over a 2,000 square mile area in Norwegian waters due to seismic surveying.

And air gun pulses reduced redfish catch rates off the California coast by 50 percent, **1992 studies** found.

Lindy Weilgart, a researcher at Dalhousie University, said conducting experiments is difficult in the ocean because it is not a controlled laboratory.

Chemical pollution, climate change and ocean acidification are constantly changing the oceans' composition, meaning that studies can show short-term changes but the longer-term impacts of noise are hard to assess.

Weilgart said there are safer ways to test for oil deposits under the ocean floor, including a technique known as "marine vibroseis", which uses the same amount of

energy as an air gun shot but stretches it out over time so the intensity is much lower.

"You can put it over an egg and the egg would not crack," she said.

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