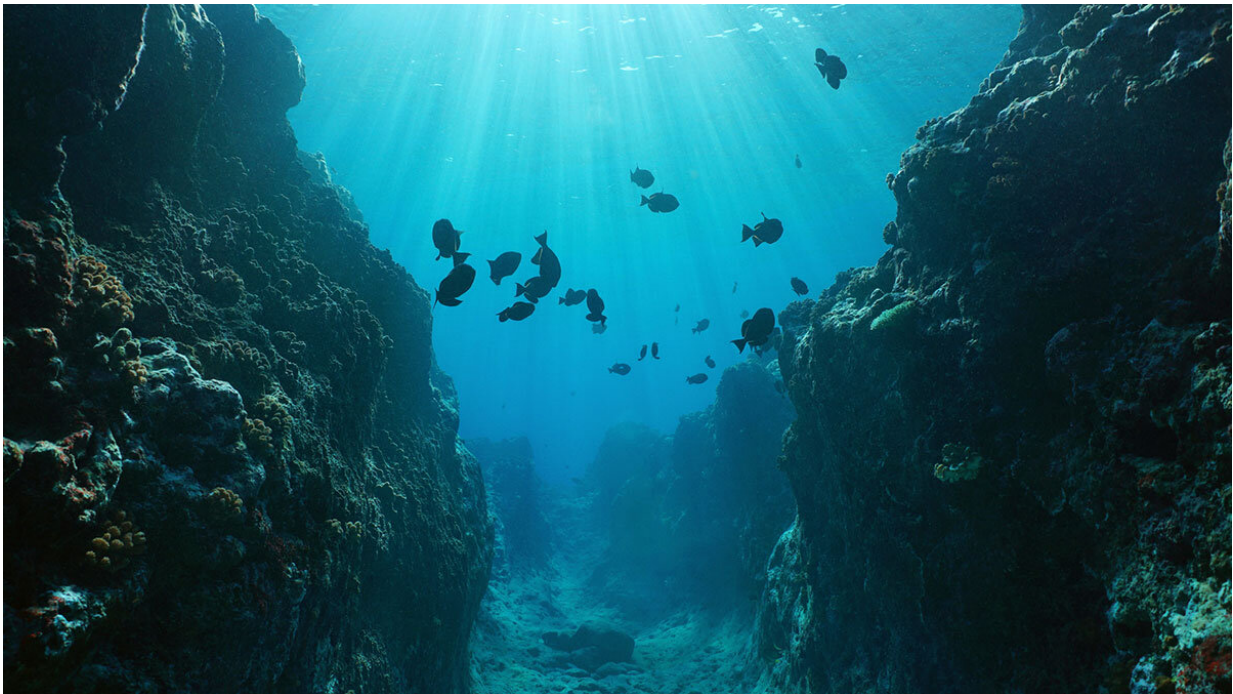


# Survey tool underestimating damage from fish farming and platforms

April 23 2021

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Credit: Heriot-Watt University

The camera system used to survey seabeds could be seriously underestimating disturbances to ecosystems, according to new research from Heriot-Watt University.

The new report says that [sediment camera](#) systems, known as SPI cameras, are probably painting an inaccurate picture for regulators and

authorities.

SPI cameras have been used for 50 years to document the health of the seafloor around fish farms and oil and gas platforms.

The camera works by penetrating the sediment and taking a side-on picture. The images can tell researchers how healthy or polluted the sediment is based on its color and thickness, and the presence or absence of animals.

Annabell Moser, from the Lyell Centre, a partnership between Heriot-Watt and the British Geological Survey (BGS), led the research.

With scientists from BGS and the Scottish Association of Marine Science (SAMS), she developed a laboratory version of the SPI camera to test the likelihood that the SPI camera system was giving inaccurate results.

Moser said: "Our tests showed that the model camera caused particles from the top layer to be dragged down into deeper layers, which very possibly makes the sediment look much healthier than it actually is.

"This is concerning, because for 50 years this [camera system](#) has been used by authorities as a way to determine whether industrial activity is harming the seafloor.

"Our research shows that the damage from [fish farming](#) or oil and gas activities may have been underestimated.

The team will work with the Flanders Marine Institute in Belgium later this year to test the extent of sampling artifacts associated with actual SPI camera systems.

This research has been published in *Frontiers in Marine Science*.

**More information:** Annabell Moser et al. Sediment Profile Imaging: Laboratory Study Into the Sediment Smearing Effect of a Penetrating Plate, *Frontiers in Marine Science* (2021). [DOI: 10.3389/fmars.2021.582076](https://doi.org/10.3389/fmars.2021.582076)

Provided by Heriot-Watt University

Citation: Survey tool underestimating damage from fish farming and platforms (2021, April 23) retrieved 15 May 2024 from <https://phys.org/news/2021-04-survey-tool-underestimating-fish-farming.html>

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