



Christine Ward-Paige (Photo: @rileysmithphoto)

Fish tales

New eOceans software allows scientists and the public to record and share ocean-data in real time

“Seen a whale or turtle? Tell Jack!” It’s a refrain common to many sea-watchers in Newfoundland and Labrador, seen on stickers and postcards all over the province as the snow melts and the leaves unfurl for another sunny season. And sure enough, as the whale tails start smacking the surface of the sea, Twitter alights with reports of sightings, thanks in part to those stickers. They’re part of a local Fisheries and Oceans Canada (DFO) initiative encouraging the public to help marine mammal and sea turtle scientist Dr. Jack Lawson track whales and sea turtles as they pass through the province’s waters each summer.

It’s a neat example of how data from non-scientists can help research, and of how important publicly-sourced data can be to oceans research, but where does all that information end up? “It just gets gobbled into this vacuum of data,” says Christine Ward-Paige, a marine scientist and founder of eOceans, a company developing a software-as-a-service

platform which would collect data like this for researchers, industry and departments like DFO.

Anybody can contribute data to the platform for free, via an app, she says, and that “anybody” can range from scientists and fish harvesters to anyone with an interest in the oceans around them. Scientists, industry or government departments would then subscribe to the service and have the data delivered to them processed in the metrics they needed. Ward-Paige is hoping the model will upend the way marine science is done, allowing changes in the ocean to be tracked as they happen, and hence allowing science to respond immediately. “The mission is to speed up ocean science and make it real time, make it predictive and proactive rather than reactive,” says Ward-Paige. She says she’s not aware of anything else like eOceans on the market right now.

Giving the power to the people for ocean observation will also provide insight into which areas are most

valued by people and communities, which could inform policy, like the establishment of future marine protected areas, she says.

eOceans was part of Halifax’s Volta Effect accelerator program in 2018 and is now part of Seattle’s Washington Maritime Blue accelerator program. Ward-Paige is attending remotely. The company employs two people including Ward-Paige, and she has a number of soft launches planned throughout the spring.

The idea for the platform came from her own experiences as a researcher. She says she’d often arrive at a site to do fieldwork and the people who lived in the area, not necessarily scientists, would frequently have the best information about what was changing and where she should start. She was one of the first people in the country to complete a PhD in crowd-sourcing marine research data, she says.

But of course, it’s not just non-scientists who will contribute data. In fact, the platform will make it easier for scientists to log and collect data, allowing them to record information electronically once, as it’s gathered, rather than first writing down measurements and locations on paper and then inputting it into a computer when they’re back on land. That will speed things up considerably, she says, and it’s the real-time digitization aspect that eOceans is focusing on first.

Just as cellphones have enabled Newfoundlanders and Labradorians to jump on Twitter and tweet to Dr. Jack Lawson whenever they see a whale, Ward-Paige says a platform like eOceans can exist now because most of us are carrying all we need to record, collect and transmit data via our phones. But the impetus for eOceans goes beyond our pocket supercomputers, she says.

“Socio-economically, it’s essential right now. Oceans are undergoing so much change, not only in the negative way where we’ve gone through a long history of over-exploitation and mismanagement, but we’ve come to realize just how important our oceans are for society, for people, for life.” |nrm

FEEDBACK

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