

# Wiring the ocean

February 18 2013

---

For most people, the sea is a deep, dark mystery. That is changing, though, as scientists find innovative ways to track the movements of ocean-going creatures.

Stanford [marine sciences](#) professor and Stanford Woods Institute Senior Fellow Barbara Block is using technology to enable live feeds of animal movements relayed by a series of "ocean WiFi hotspots." This could help protect [marine ecosystems](#) by revolutionizing how we understand their function, population structure, [fisheries management](#) and species' physiological and evolutionary constraints.

Block explains how she is studying pelagic creatures with telemetry tags, and how she plans to "wire" the ocean at the annual American Association for the Advancement of Science (AAAS) meeting in Boston.

The miniaturization of sensors for tags, combined with acoustic receiver-carrying mobile glider platforms and instrumented buoys, has vastly expanded our capacity to obtain data from oceans at levels as small as bacteria and as large as [blue whales](#). Block's work is part of a larger effort to establish a global network of instruments to more comprehensively study the biosphere as it is altered – at unprecedented rates – by human activity and climate change.

Block's project, the Blue Serengeti Initiative, builds on the Tagging of Pacific Predators program, part of the global Census of Marine Life, a decade-long study that invested \$25 million in electronic tagging,

enabling [marine scientists](#) from five nations to map ocean hot spots within the California Current.

At the AAAS meeting in Boston, Block will discuss her new project and explain how she uses wireless devices track the comings and goings of key ocean species.

Provided by Stanford University

Citation: Wiring the ocean (2013, February 18) retrieved 26 April 2024 from <https://phys.org/news/2013-02-wiring-ocean.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.