

NEWS RELEASE

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April 1, 2016

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To Be Sustainable, Conservation Needs to Consider the Human Factor

International researchers urge including the social sciences in ecosystem management, highlighting indicators of human well-being developed by Washington Sea Grant and the Northwest Fisheries Science Center.

Seattle - For too long, sustainability goals and environmental management have failed to consider the human side of conservation—how decisions affect people's lives, and how human culture, values, and equity affect conservation outcomes. Social science can contribute significantly to advancing and assessing conservation efforts. These are the conclusions of a paper published April 1 in *Science* by a team of researchers from 17 British, American and Australian institutions including the National Oceanographic and Atmospheric Administration's Northwest Fisheries Science Center, the University of Washington's School of Marine and Environmental Affairs, and Washington Sea Grant.

The authors go on to propose a set of social indicators that can be used to gauge how ecosystem management affects four essential factors in human lives: well-being, values, agency (the ability to act purposefully), and inequality. Considering such indicators, they note, serves not only to describe what exists but to define what is important in setting sustainability goals.

Suitable indicators can ensure accountability and overcome a "bias toward easily quantifiable concepts" in the natural sciences that may hinder progress toward those goals. And understanding social and cultural factors is essential to defining sustainability in local contexts:

cherished landscape elements such as lawns in American suburbs and badgers in Britain help shape residents' sense of wellbeing.

"Evaluating how well we are meeting sustainability goals requires more robust and inclusive indicators of the health of both people and nature," said co-author Melissa Poe, a social scientist at Washington Sea Grant and the Northwest Fisheries Science Center. She and the other authors are members of the Social Wellbeing in Marine Management (SWIMM) working group, which began convening in 2014 in Seattle to explore the social dimensions of marine and coastal environments.

"We are unique, the only group I know of that consists almost entirely of environmental *social* scientists working on applied environmental science," said Sara Breslow, who spearheaded the project and is now a program manager at UW's Center for Creative Conservation. The *Science* article is the first of five peer-reviewed papers from the SWIMM group to be published. SWIMM-developed indicators of human wellbeing are already being used in integrated marine management, marine spatial planning, and resilience assessments in the Pacific Northwest, thanks to an initiative by Washington Sea Grant and NOAA's Integrated Ecosystem Assessment Program.

"Culture, values, equity and a sense of self-determination are the known unknowns in conservation management," said Phillip Levin, the acting director of conservation biology at the Northwest Fisheries Science Center and another co-author. "The time has come to make them known." That knowledge has practical implications; as the paper notes, before undertaking collective ecosystem management, it's important to know whether local values are conducive to it.

"Without attention to whose well-being is measured and the values that underlie goals," warned Poe, "we risk exacerbating inequalities and eroding the connections to nature that motivate people to practice stewardship and care for one another."

Prudent planning means including social scientists from the start, rather than bringing them in later to clean up the damage, argues the paper's lead author, Christina Hicks of Lancaster University's Environment Centre. "With humans altering climate processes and ecosystem functions, it is important that we consider things from a social science as well as natural science perspective."

"For decades we viewed people and nature as separate and we managed nature by excluding people," said Levin. "We now know that is a flawed perspective. Nature and people are intertwined."

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Washington Sea Grant, based at the University of Washington, provides statewide research, outreach, and education services addressing the challenges facing our ocean and coasts. The National Sea Grant College Program is part of the National Oceanic and Atmospheric Administration, U.S. Department of Commerce. www.wsg.washington.edu