Save Australia’s ecological research

Australia will lose its integrated long-term ecological research (LTER) network at the end of 2017 (1). The network comprises more than 1100 long-term field plots within temperate forests, rainforests, alpine grasslands, heathlands, deserts, and savannas, with an unparalleled temporal depth in biodiversity data. Its many achievements include Australia’s first published trend data for key ecosystems (2) and a suite of IUCN ecosystem risk assessments (3).

Long-term ecological data are critical for quantifying environmental and biodiversity change and identifying its causes. LTER is especially important in Australia because many of the country’s ecosystems are subject to frequent climatic extremes. Continuity of long-term research and monitoring, and broader use of existing time series data by science and policy communities, are crucial for measuring impacts of current unprecedented global environmental change and reliably predicting future impacts.

Long-term research and monitoring is also essential to understanding relationships between the economy, ecosystems, and risks to human well-being (4). The loss of Australia’s LTER network will substantially diminish resource managers’ ability to judge the effectiveness of management interventions on which billions of dollars are spent annually (such as vegetation restoration and invasive species control). Ending the network will also jeopardize sustainability assessments of resource-based industries such as agriculture and forestry. Moreover, Australia’s capacity to participate effectively in global initiatives such as the International LTER will be impaired. The LTER network is part of the Terrestrial Ecosystem Research Network (TERN), funded by Australia’s government (5). TERN’s inclusion of existing LTER capability provided a template that others in Europe, China, and South Africa have followed. Discontinuing the LTER network within TERN will therefore undermine global cohesion in environmental research and monitoring.

At a time when the United States is increasing funding for its LTERs by US$5.6M annually (6), and other nations are rapidly building substantial LTER capacity, terminating Australia’s LTER network is totally out of step with international trends and national imperatives. To prevent the collapse of the LTER network and prevent the resulting irreversible impacts of breaking current time-series, urgent and direct investment by the Australian government is crucial.

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SUPPLEMENTARY MATERIALS

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Academics can help shape Wikipedia

Public understanding of science is increasingly important. Wikipedia is widely used by students, educators, researchers, doctors, journalists, and policy-makers. The online, crowd-sourced encyclopedia site is perceived as increasingly trustworthy, making it a key public engagement platform with immediate impacts on scientific literacy (1).

Now is an important time in the evolution of the encyclopedia. Its parent organization, the Wikimedia Foundation, is working to shape its strategic focus through to 2030. This represents an unprecedented opportunity for the global scientific community to advise on its future. Wikipedia has discussion pages for users to provide feedback on some of the upcoming challenges (2).

The scientific community can improve Wikipedia on a more granular level by learning to edit the encyclopedia in areas that need improvement. Poorly written articles can mislead readers and give a false impression of a research field. The recent introduction of a new editing interface has made the encyclopedia as easy to edit as a Word document, and a short 2014 article outlines some editing advice for scientists (3).

Wikipedia is increasingly engaging expert communities to improve accuracy and coverage. Interested parties can contribute to several existing collaborative initiatives or propose new ones. For example, some academic journals (such as PLOS Computational Biology, Gene, and WikiJournal of Medicine) have agreed to dual-publish articles as both a citable publication and Wikipedia page (4). The Cochrane library, a collection of health care databases, has a similar quality-improvement
Socially responsible fishing practices could lead to overfishing to recoup labor costs.

In their Policy Forum “Committing to socially responsible seafood” (2 June, p. 912), J. N. Kittinger et al. do an admirable job of highlighting the need for marine scientists to catch up with other stakeholders in the growing discipline of socially responsible food. However, efforts to provide and sustain socially responsible seafood should not replace the work to ensure that seafood is sustainably managed.

Unfortunately, fishing operations can use their efforts to combat the socioeconomic problems associated with industrialized fishing as an excuse to let slip their commitments to sustainable fishing. As Kittinger et al. rightly point out, bad actors engaging in social malpractice depress the cost of seafood and simultaneously allow for overexploitation over the long term. However, efforts to solve social issues—such as increased wages, improved living conditions, and access to better food and healthcare—should not be used as incentives to catch and sell more fish in the short term in order to offset the true cost of labor. In a recent study of the impacts of each marine sustainable development target on the others, researchers concluded that ending overfishing is the most common prerequisite for the success of other targets on the United Nations’ sustainable development plan (1). Overfishing cannot be used to pay for fundamental human rights.

At the UN Oceans Conference, several companies, along with environmental organizations and some national governments, endorsed the Tuna 2020 Traceability Declaration (2). The Declaration commits not only to catching or sourcing socially responsible tuna but also to combatting illegal fishing, implementing sustainable fishing practices, recovering overfished stocks, and moving fisheries management toward the development and use of previously agreed-upon harvest control rules when making management decisions. Through the language of the Declaration, the endorsers demonstrated their joint commitment to social and environmental responsibility. This can be a model for other seafood products around the world.

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