



REPRINT

NATIVE KNOWLEDGE

J. Couzin's article "Opening Doors to Native Knowledge" (News, 16 March, p. 1518) revealed the trend toward increased collaboration between scientific and local cultures in providing answers to climate-change questions in the Arctic. We believe that polar science could benefit from experiences from those developing countries where a suite of locally based approaches to environmental assessment are emerging (1).

Two factors make these techniques particularly relevant in the Arctic. First, locally based methods appear effective in incorporating evidence-based assessments in decision-making at the local level (2), and, by their nature, locally based methods tend to focus on issues of greatest concern to local stakeholders, thus having considerable potential to influence on-the-ground management activities. Second, locally based methods can track the delivery of goods and services from natural ecosystems, which are a prime focus of several international environmental agreements (3), yet are extremely hard to monitor using a top-down approach (1). Without proper monitoring of ecosystem benefits, the success of these international agreements cannot be evaluated, exposing them to criticism or abandonment.

Locally based approaches are, however, vulnerable to various sources of bias. Problems include a risk, in the absence of careful documentation, of methods drifting over time or of results reflecting long-term perceptions more than current trends. This caveat is also relevant in the Arctic. We propose that thorough comparison of data collected by local stakeholders and scientists is an important avenue for further research.

Finn Danielsen, NORDECO, Skindergade 23, DK-1159 Copenhagen, Denmark.

Neil Burgess, WWF-USA, 1250 24th Street NW, Washington, DC, USA, and University of Cambridge, Downing Street, Cambridge, CB2 3EJ, UK.

Elmer Topp-Jørgensen, Department of Fisheries, Hunting and Agriculture, P.O. Box 269, DK-3900 Nuuk, Greenland.

References

1. See www.monitoringmatters.org/cases.htm
2. F. Danielsen *et al.*, *Ambio* **36**, 566-570.
3. Report on the 6th Meeting of the Conference of the Parties to the Convention on Biological Diversity, Strategic Plan Decision VI/26 (UNEP, Nairobi, Kenya, 2002).

SCIENCE 1 AUGUST 2007



REPRINT

NATIVE KNOWLEDGE

**Finn Danielsen, Neil Burgess,
Elmer Topp-Jørgensen**

1 AUGUST 2007

www.sciencemag.org/cgi/eletters/315/5818/1518

Copyright 2005 by the American Association
for the Advancement of Science