

Title

Scientists have published a paper describing a ground-breaking new tool for assessing the value of services delivered by nature at important sites for biodiversity conservation.

Protected areas and other sites of biodiversity importance often provide significant benefits to people in the form of ecosystem services such as food, clean water and climate regulation. But the value of these services is rarely recognised when land-use decisions are made, for example, to log a forest or drain a wetland. Demonstrating nature's value in economic terms often carries weight with decision makers, and can lead to better-informed decisions that support biodiversity conservation.

BirdLife International, Cambridge, Southampton and Anglia Ruskin Universities, the RSPB (BirdLife in the UK) and the United Nations Environment Programme World Conservation Monitoring Centre are among 15 institutions that have jointly developed an innovative approach to putting a value on ecosystem services: The Toolkit for Ecosystem Service Site-based Assessment (TESSA). Now authors from the collaborating institutions have published an overview of TESSA in the journal *Ecosystem Services*, including examples of how it has been applied at sites around the world [1].

Until recently, methods and tools for ecosystem service assessment generally required substantial resources or specialist knowledge. TESSA guides non-specialists through a selection of accessible, low-cost methods, to identify the ecosystem services that are important at a site, and evaluate the benefits that people get from them now, compared with those expected under alternative land-uses. TESSA also recommends how the results can be communicated, both to decision-makers and to local stakeholders.

Importantly, TESSA enables users to indicate who will be the 'winners' and 'losers' as a result of any change in the state of the site and ecosystem service delivery.

"This ground-breaking collaboration between many scientists has resulted in an innovative and valuable tool to help promote better planning decisions, and to support biodiversity conservation and ecosystem service delivery, and hence human well-being", said Jenny Birch, BirdLife International's Ecosystem Services Officer.

The methods incorporated in TESSA have been applied at more than 15 sites, including many Important Bird and Biodiversity Areas (IBAs), in Asia, Africa, South America and the Pacific. Using TESSA, Bird Conservation Nepal (BirdLife in Nepal) published a national review of biodiversity and ecosystem services at IBAs, jointly with Nepal's Department for National Parks and Wildlife Conservation. The report was launched by Nepal's Ministry of Forests and Soil Conservation in October 2012.

"Users of TESSA around the world have shown the critical role that local people can play in generating locally relevant data on ecosystem services, to inform management options at particular sites", said Birch. "In each of our test sites, trade-offs have been revealed, and these have provided insights into the actions required to achieve biodiversity conservation, while ensuring fair and equitable distribution of costs and benefits to people."

TESSA has already been downloaded by people from over 40 countries, including researchers, non-governmental organisations, students and government employees.

"Our experiences lead us to believe that TESSA can improve understanding of ecosystem services, and promote consideration of the diverse and substantial values of nature in national and local decision-making", said Dr Stuart Butchart, BirdLife's Head of Science. "Its use can raise awareness and build public and government support for more sustainable evidence-based policy, and management decisions that take into account the crucial role of nature in delivering human wellbeing and sustainable livelihoods."

The collaboration to develop TESSA has been supported by the UK government's Darwin Initiative, Axa Research Fund, and in particular the Cambridge Conservation Initiative Collaborative Fund for Conservation and Arcadia.

Available at <http://www.birdlife.org/datazone/info/estoolkit>), TESSA currently covers five classes of service:

global climate regulation, water-related services, harvested wild goods, cultivated goods and nature-based recreation. Funding permitting, development will continue, with new modules on pollination, cultural services and coastal protection in preparation, and the release of a web-enabled version is planned.

[1] K.S.-H. Peh et al. TESSA: A toolkit for rapid assessment of ecosystem services at sites of biodiversity conservation importance *Ecosystem Services* 5 (2013) e51–e57