ESPA impacts

An interdisciplinary research programme applies new tools to show how ecosystem services can reduce poverty

We all rely on the services that healthy ecosystems provide. The world’s poorest people are often most directly dependent — left empty-handed if firewood or fertile cropland becomes scarce, for example, or exposed to flooding from degraded watersheds. But many of these same people serve as custodians of globally important resources, such as forests that soak up carbon emissions.

There is also growing evidence that recent efforts to reduce poverty have had severe impacts on ecosystems, which could lead to greater vulnerability and poverty in the future. The relationship between ecosystems and poverty is increasingly recognised, but we still know little about how both sides can thrive in a rapidly changing world. The Ecosystem Services for Poverty Alleviation programme produces knowledge and tools to address this challenge, through research in Amazonia, China, South Asia and Sub-Saharan Africa.

In Bolivia’s Santa Cruz valleys, a local NGO is also arranging to pay local people for protecting forests. But here the focus is on improved research design and cost-effectiveness. The project takes an idea from experimental economics — controlled programme evaluations that scientifically measure impact — and applies it, for the first time, to conservation and poverty. Results will

Find out more: www.espa.ac.uk
These projects generate benefits for local poor. For example, part of Swahili Seas’ US$15,000-per-year carbon contract will employ local villagers and fund new community buildings. The Bolivian scheme has signed up farmers for in-kind payments such as beehives that allow steady income from intact forests, and its study of cost-effectiveness is being watched closely by development agencies such as DFID.

Global business and policy leaders are also demanding ESPA’s emerging evidence: the Kenyan Prime Minister’s office, for example, will use reports from Swahili Seas during 2011 UN climate change negotiations in South Africa. And ESPA’s new tools for policymakers and practitioners — including the Ecosystem Services Index, workshops on justice thinking, a map of mangroves’ value in Kenya, statistical models in China and Bolivia — are designed to be easy to spread elsewhere.

Next steps

ESPA is now commissioning large consortium projects to build on the lessons from earlier rounds of research, and will make other major research investments in the next two years. Meanwhile, the international community keenly feels the need to better understand poverty-ecology links. For example, the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services, a global forum to be established next year, will bring together the best evidence in this field. ESPA’s role is to feed new findings into that global debate, but also to help set the agenda going forward, identifying the next big questions to tackle.

NEW KNOWLEDGE

- ESPA projects demonstrate visionary ways to design research and measure impact. In Bolivia, an ESPA-funded project is applying a rigorously scientific approach, inspired by experimental economics, to measure whether a ‘payment for ecosystem services’ scheme can improve forest cover and people’s lives.
- Other projects are also generating important new data, including some types of evidence usually unavailable — such as a detailed multi-decade record of six different ecosystem services, reconstructed from lake sediments in China.
- ESPA projects promote innovative concepts that can alter the way policymakers think about solutions. For example, case studies on ‘just ecosystem management’ highlight arguments about issues of justice and rights that underlie many conservation debates.

CREATING IMPACT

- ESPA is an unprecedented collaboration between three world-leading funders of research in development (DFID), social sciences (ESRC) and ecology (NERC). Interdisciplinary research programmes at this level are rare, and require all involved to move beyond their usual ways of conceiving global problems.
- Some initiatives, such as the first carbon credit project for mangrove forests, explore new sources of support for conservation and poverty alleviation and bring direct benefits to local people. Complementary to this, research measuring the cost-effectiveness of payment schemes will provide the evidence needed for funding pools to grow.
- Many ESPA projects are yielding new tools to influence policy, which other groups could emulate around the world. These range from a satellite-based map totalling up the market value of Kenya’s mangroves, to an Ecosystem Services Index summarising ecological trends that threaten people’s livelihoods.