

conservation

Communicating international development research

March 2007

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Community-based Natural Resource Management Questioning the 'success stories'

Community-based Natural Resource Management has been popular since the 1980s. Donors, developing country governments and non-governmental organisations have supported this policy and it continues to be popular, despite repeated failures to deliver benefits.

The theory behind Community-based Natural Resource Management (CBNRM) argues that the best way to manage natural resources is for local people to use their local knowledge and technologies. However, research from the University of East Anglia in the UK argues this theory is not reflected in practice and most CBNRM schemes fail.

CBNRM aims to achieve both sustainable environmental management and community development. The key arguments for CBNRM are:

- it contributes to poverty reduction by using local labour and investment
- it promotes the use of local knowledge and local technologies, which helps to preserve these
- local management means local people have power and make decisions, creating accountable and democratic local institutions
- the use of resources is enforced locally by people who have a stake in its protection, which is more effective than government enforcement
- it is a better solution to conservation than fencing off natural resources and excluding people from them.

The idea of community management is attractive to policymakers, programme designers and donors. However, because the theory is attractive, policymakers and environmental managers use biased 'success stories' to support the theory. In reality, the communities involved are usually disappointed with the process.

There is also often a contradiction between the scientific, ecological principles of natural resource management and the aims of a community. For example, migratory animals or fish do not respect a boundary created for a community-managed area.

CNBRM uses participatory processes and

decentralised decision-making to give power to local people. This can also help them to understand the importance of managing local resources, such as a community forest. However, these methods often reinforce existing power structures, such as chiefdoms. If power is not shared equally, CBNRM can also be used to impose the views of outsiders. For example, ecologists can choose to work with local customs and practitioners who support their views.

Whilst policymakers and practitioners tell each other success stories about CBNRM, there appear

to be few examples of programmes that have improved environmental management and the well-being of local people. The author suggests several reasons for this, which policymakers should consider before supporting CBNRM:

- There is no comprehensive evaluation of CBNRM programmes. Monitoring and evaluation is complex and needs to cover environmental issues, poverty reduction and institutional changes.
- Without evaluation, supporters of CBNRM can always find some level of 'success' to justify its use.
- Bureaucracies want models that they can repeat, but communities and their relationship with the environment are too complex for this approach to work.
- CBNRM depends not only on suitable conditions in the community but also on supportive government and local elites, whose own interests often take over.

Piers Blaikie

School of Development Studies, University of East Anglia, Norwich, NR4 7TJ, UK
T +44 (0) 1603 592807 F +44 (0) 1603 451999
p.blaikie@uea.ac.uk

'Is Small Really Beautiful? Community-based Natural Resource Management in Malawi and Botswana', *World Development* Vol. 34, 11, pages 1942–1957, by Piers Blaikie, 2006

Many people argue that the best way to manage natural resources is for local people to use their knowledge and technologies. However, this theory is not reflected in practice



Effective local governance in the Sahel

Decentralisation creates opportunities for local people to have a say in the decisions that affect their lives. Decentralising the management of natural resources can contribute significantly to poverty reduction. Poor people can express their needs more clearly and local authorities can target services more effectively.

The International Institute of Environment and Development in the UK presents lessons from the West African Sahel.

Mali, Burkina Faso, Niger and Senegal are all at different stages of decentralisation. In all four countries, the governments have accompanied decentralisation reforms with policy changes and new laws. Despite this, central governments are often reluctant

to transfer any real power to lower levels, arguing that they are not yet ready to manage resources effectively.

Supporting local people to understand and participate in reform processes is a major challenge, especially where levels of poverty and illiteracy are high. It is also difficult to involve marginalised social groups (such as pastoralists) in decentralised governance.

For all citizens to participate, locally elected governments must address livelihood issues more effectively. This will increase confidence in these local governments and increase their ability to achieve larger changes. In practice, local councillors face big problems carrying out these tasks. The high cost of delivering services in remote rural areas of the Sahel is a major problem.

The research shows:

- Local elites often dominate rural councils and use their powers to pursue their own interests. Because of this, marginalised groups are further excluded from social and economic services.



Women attend a village meeting in Zikieme, near Kaya in Burkina Faso

Jan Banning / Panos Pictures

- Training and education in local languages can enable people to explain and defend their livelihoods, and participate more effectively in decentralised governance.
- Learning groups, which bring together different local people, can help different groups to work together to solve common problems.

Participation is a key aspect of effective decentralisation. Participatory budgeting training in Senegal helped councillors to create budgets that local people could understand.

At the same time, local people established a monitoring system to track how local government officials make decisions with respect to council finances. Participatory monitoring and evaluation in Mali allowed local people to judge whether their local authorities were delivering benefits at reasonable costs.

Supporting decentralised governance of natural resources demands a step-by-step approach to involving local people and creating confidence in the system. The researchers recommend:

- The full and active engagement of all local groups in decentralisation and governance reforms is essential to their success. Building coalitions among different local groups is particularly important for involving marginalised groups.
- Getting good policies requires a good understanding of key local issues and challenges and learning lessons from experience.
- Policymakers must increase their knowledge of issues by recording examples of best practice and using these findings in future policy processes.

International Institute of Environment and Development, 3 Endsleigh Street, London, WC1H 0DD, UK
T +44 (0) 207 3882117 F +44 (0) 207 3882826
drylands@iied.org

Making Decentralisation Work for Sustainable Natural Resource Management in the Sahel: Lessons from a Programme of Action-research, Policy Debate and Citizen Empowerment, International Institute of Environment and Development: London and Edinburgh, 2006 (PDF)
www.iied.org/pubs/pdf/full/12530IIED.pdf

case study

Securing the benefits from mangroves and coral reefs

Coral reefs and mangroves form natural barriers to protect coastal areas and support communities who use coastal waters. But damage to both ecosystems has led to reduced fish catches, a loss of export earnings and less tourism.

Reefs and mangroves have many benefits:

- Reefs provide an annual value of US\$100,000-600,000 per square kilometre for a country's economy; mangroves provide US\$200,000-900,000 per square kilometre.
- Both ecosystems are critical for peoples' livelihoods, supporting industries including fisheries, tourism and providing building materials.
- They contribute significantly to the economies of Small Island Developing States, 90 percent of which have reefs and 75 percent mangroves.
- Reefs and mangroves protect shorelines, absorbing up to 90 percent of the energy from wind-generated waves during hurricanes and tropical storms.

Threats to these ecosystems include overfishing, destructive fishing methods, coral mining and pollution. Nearly 35 percent of the world's mangroves have been destroyed already, and 30 percent of reefs are seriously damaged.

The United Nations Environment Programme shows how the environmentally sustainable management and development of the coast will be more cost effective than restoring livelihoods and ecosystems after a catastrophe. Mangrove restoration is simple and large areas of forest are being replanted using volunteers and local labour. However, growing a mangrove forest that replicates its original natural biodiversity is difficult. Reefs are also difficult to restore. Most attempts have been expensive and unsuccessful.

Governments, civil society and the private sector must:

- give priority to maintaining reefs and mangroves and ensure that any restoration undertaken is environmentally sound
- introduce and expand good coastal management practices, including marine protected areas and monitoring and assessment of coastal regions
- direct activities towards the root causes of the damage, rather than focus on short-term, small-scale programmes
- recognise that the cost of maintaining these ecosystems is much less than the benefits received
- encourage political will and action from the world's most developed nations, where over 30 percent of reefs and mangroves can be found.

Sue Wells, Corinna Ravilious and Emily Corcoran

United Nations Environment Programme, World Conservation Monitoring Centre, 219 Huntingdon Road, Cambridge, CB3 0DL, UK

T +44 (0) 1223 277314 F +44 (0) 1223 277136 info@unep-wcmc.org

'In the Front Line: Shoreline Protection and other Ecosystem Services from Mangroves and Coral Reefs' UNEP-WCMC: Cambridge, 2006 (PDF)

www.unep-wcmc.org/resources/PDFs/In_the_front_line_LR.pdf

The role of gender in managing biodiversity and agriculture

Genetic diversity is disappearing: 75 percent of today's food comes from 12 plants and 5 animal species, and rice, maize and wheat contribute nearly 60 percent of the calories and proteins obtained by humans from plants.

Women, men, boys and girls perform different tasks and have specific knowledge about biodiversity, land quality and water availability. Ignoring gender differences risks losing local knowledge; this can slow economic growth and threaten agricultural production. For example, knowledge amongst Masaai in Tanzania about how to maintain animal genetic diversity differs according to age and gender.

The loss of genetic diversity also means women are less able to participate in decision-making about preserving resources. This is because they have to make sure their families have enough to eat and plant next year's crop.

Research published by the United Nations University-World Institute for Development Economics Research (UNU-WIDER), Finland, reports on LinKS (Gender, Biodiversity and Local Knowledge Systems for Food Security), a United Nations Food and Agricultural Organization-funded project in Mozambique, Swaziland, Zimbabwe and Tanzania.

The eight-year project focused on the value of local knowledge for food production and the roles that women and men play in protecting the environment. The project ran workshops to raise awareness about the importance of local knowledge and increase understanding of gender roles in traditional farming.

The LinKS project found that:

- plans and budgets originally set up by researchers did not always consider the time needed to apply new techniques
- people who participated in training sessions, and felt that they understood gender issues, were not always able to use the approaches and tools properly afterwards
- many researchers did not have the skills to analyse and use gender-sensitive data, but were willing to learn these
- HIV and AIDS had a significant impact on the loss of crop and seed knowledge, particularly amongst women, because the loss of able-bodied men to work the land meant the responsibility to provide food for children fell to women alone. Food security programmes must integrate local knowledge with new technologies and global demands. For example, the new International Treaty on Plant Genetic Resources for Food and Agriculture will only succeed if policymakers recognise that men and women farmers have different local knowledge. Based on the evidence from the LinKS project, countries introducing the treaty must:
 - focus activities on local solutions, instead

www.id21.org

case study

Balancing biodiversity and development in the Amazon

Balancing environmental preservation with the needs of local people is an enormous challenge in areas of high biodiversity. This is even more difficult if there is pressure on resources from outsiders.

The Mamirauá Sustainable Development Reserve is situated in north-western Brazil. The flooded forest of the reserve is an area of high biodiversity. About 1,600 local people live within the reserve focal area and 4,401 around it. They depend on fishing, agriculture and timber extraction to survive.

In 1996, Mamirauá was designated a Sustainable Development Reserve. This was a result of the partnership between scientists, who established the Sociedade Civil Mamirauá (SCM) in 1992, and the local communities. The SCM aimed to provide a working model for people in protected areas, in which sustainable livelihoods could be generated for poor and marginalised groups living in areas of high biodiversity. A report from the International Institute for Environment and Development in the UK presents lessons learnt from the SCM's work in Mamirauá

Key findings include:

- Using a familiar method of resource management, possibly combining science and traditional knowledge, is likely to be more accepted and successful in the long term.
- Concentrating on a particular area to establish a working model is a good way to start.
- Successful projects are a crucial way of influencing policy and legislative changes.
- Marketing is vital for fishery and forestry products, and involves identifying markets and training people.
- Self-appraisal by those involved in projects helps improve their performance.
- Information obtained from monitoring can help to refine regulations.

The scientists realised that without involving local people in the management of Mamirauá, its long-term viability would be threatened, not least by external commercial interests. With donor help, the SCM promoted sustainable community management of resources. The benefits of this proved to be an incentive to involve locals in surveillance and conservation activities. To replicate the successes of Mamirauá requires:

- creating a consistent policy and legal environment that balances the needs of local groups and that of government, with the help of external organisations if necessary
- addressing the 'governance gap' in neglected areas by patiently building on existing processes, linking them with livelihood activities and carefully involving the most marginalised groups
- enforcing rules and surveillance in a participatory manner, with compensation for local volunteers, as a partnership between communities and the authorities
- introducing alternative sustainable livelihoods such as ecotourism, with the help of grants if necessary in remote areas
- ensuring clear understanding of the donor-partner relationship, which should be sustainable, with incentives to attract qualified staff
- fulfilling donor responsibilities using an awareness of local context, appropriate project time frames and protecting successful projects from changes in donor policy or staff.

Izabella Koziell and Cristina Y. A. Inoue

Izabella Koziell, Department for International Development, 1 Palace Street, London, SW1E 5HE, UK
T + 44 (0) 207 0230000 F + 44 (0) 207 0230019 i-koziell@dfid.gov.uk

Mamirauá Sustainable Development Reserve, Brazil: Lessons Learnt in Integrating Conservation with Poverty Reduction, Biodiversity and Livelihoods Issues No. 7, IIED: London, by Izabella Koziell and Cristina Y. A. Inoue, 2006 (PDF) www.iied.org/pubs/pdf/full/9168IIED.pdf

- of trying to repeat successes from elsewhere
- ensure it recognises the different and sometimes unequal levels of access to resources between men and women
- use the Tanzanian example as a possible guide to develop trust funds to support the treaty
- provide adequate training that encourages both men and women farmers to participate in decision-making processes and share the benefits from plant genetic resources
- understand the reasons that encourage

or stop practitioners from using LinKS concepts in their work, and find ways to improve their capacity to do so.

Yianna Lambrou and Regina Laub

Yianna Lambrou
T +39 06 57054550 F +39 06 57052004
yianna.lambrou@fao.org

Gender, Local Knowledge, and Lessons Learnt in Documenting and Conserving Agrobiodiversity, Research Paper No. 2006/69, UNU-WIDER, by Yianna Lambrou and Regina Laub, 2006 (PDF) www.wider.unu.edu/publications/rps/rps2006/rp2006-69.pdf

Connecting biodiversity with poverty reduction

Declines in biodiversity weaken attempts to achieve the Millennium Development Goals. But some approaches to reducing poverty are likely to increase the rate at which biodiversity is lost. Biodiversity considerations must be integrated into poverty alleviation strategies.

Biodiversity refers to the variety of life on earth. It includes genes, individual species and ecosystems. The Millennium Ecosystem Assessment recently reported that biodiversity is being lost at an alarming rate. Factors causing this loss include land use change, climate change, the spread of alien invasive species, the over-use of nutrients (such as nitrogen and phosphorous) and the over-exploitation of resources.

Global Biodiversity Outlook 2, a report by the Secretariat of the Convention on Biological Diversity, examines the links between poverty reduction and biodiversity. A loss of biodiversity – such as the loss of species or changes to habitats – can be bad for poor people, who often depend on these resources for food, a supply of fresh water and resources from which to make a living. However, actions to achieve poverty reduction, such as expanding agriculture and improving rural transport networks, are likely to accelerate the loss of biodiversity in the short term. For this reason, biodiversity considerations need integrating into poverty alleviation strategies.

The report also finds that:

- Reducing poverty is the priority for developing countries. Protecting biodiversity is often not well integrated into development plans, with little funding for this. This trend must change to reach the 2010 target for reducing biodiversity loss.
- Trade liberalisation, such as that associated with the Doha Development Round, may encourage land conversion and a loss of biodiversity in areas of low land and labour costs. Southern Africa and Latin America are high-risk areas in this respect.

Many actions to achieve poverty reduction, such as expanding agriculture and improving rural transport networks, are likely to accelerate the loss of biodiversity in the short term

It is important that efforts to reach one MDG do not undermine progress towards another. Biodiversity conservation must feature in trade and economic policy and planning (particularly in relation to energy and agriculture), and in poverty reduction strategies. This would help to 'mainstream' biodiversity within development thinking and planning. There are several elements to this:

- It is important to recognise the value of biodiversity, especially to poor people, including the goods and services not currently traded in existing markets.
- Environmental assessments should be made more sensitive to the concerns facing poor people.
- Agricultural strategies should concentrate on improving productivity and minimising post-harvest losses, rather than bringing more land into production. Soil conservation, integrated pest management and improved water and nutrient use can all help.
- Guidelines for good agricultural practice, certification and labelling schemes can encourage more sustainable farming practices.
- 'Landscape-level' planning, which involves managing large geographical areas, is necessary to protect areas of high

biodiversity value, or areas that provide important ecosystem services for poor people.

- Well-managed networks of protected areas can help to protect biodiversity. Paying people to not convert biodiversity-rich areas can be effective.
- Policies can encourage greater responsibility by purchasers and processors of agricultural commodities. For example, the Roundtable on Sustainable Palm Oil agreed that there would be no conversion of primary forests to palm oil plantations after November 2005.

Secretariat of the Convention on Biological Diversity

World Trade Centre, 413 St Jacques-St, Suite 800, Montreal, Quebec, H2Y 1N9, Canada

T +1 514 2882220 F +1 514 2886588 secretariat@biodiv.org

Global Biodiversity Outlook 2, by Secretariat of the Convention on Biological Diversity, Montreal: CBD, 2006 (PDF)

www.biodiv.org/doc/gbo2/cbd-gbo2.pdf

useful websites

BRIDGE: Gender and Development
www.bridge.ids.ac.uk

Community-Based Natural Resource Management Network
www.cbnrm.net

Convention on Biological Diversity
www.biodiv.org/default.shtml

Eldis Biodiversity Resource Guide
www.eldis.org/biodiversity/index.htm

Envirolink
www.envirolink.org

International Institute for Environment and Development
– Drylands
www.iied.org/NR/drylands/index.html

IUCN - The World Conservation Union
www.iucn.org

United Nations Environment Programme
www.unep.org

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© Institute of Development Studies 2007 ISSN 1746-8655
Printed on paper produced from sustainable forests