

## land

Communicating international development research

September 2006

## In this issue

**Stronger land rights improve forest management in Indonesia**

**Rwandan orphans denied land rights**

**Bringing the earth back to life in Western Kenya**

**Challenges with property rights for improving access to water**

**Alternatives to slash and burn agriculture in Bangladesh**

## Legal titles to land are not enough in Nicaragua

**M**any social problems in the developing world are rooted in rural land issues. Small-scale farmers in particular often feel insecure about land tenure. Some governments try to formalise land tenure arrangements and provide security for poor people. However, legal titles alone do not guarantee land security for the poorest and most disadvantaged farmers.

Government land tenure arrangements aim to clearly mark the physical boundaries of properties and the associated rights, based on the hypothesis that farmers must feel secure to make long-term investments in their land. Enforcing land rights should provide this security, but factors other than formal land tenure may influence this. Results from Nicaragua demonstrate the need to understand farmer perspectives.

Land conflicts continue to be a problem in Nicaragua, despite numerous and very different attempts to redistribute and formalise land property rights during different political eras. Research from Roskilde University, Denmark, studies three villages in Nicaragua. The distribution of land here is extremely unequal: 40 percent of the households are landless while 6 percent of the population own more than two thirds of the land area.

Agricultural cooperatives formed during land reform in the 1980s have broken down, leaving some beneficiaries dependent on the collective title of institutions that no longer function. Other beneficiaries have obtained individual titles to their land. There are also 'private' farmers in the villages who have never been affected by or benefited from land reform. Their documents range from formal individual titles to informal or no documents.

The research shows:

- Land tenure insecurity and land conflicts are common in the villages: 44 percent of households in one village describe their situation as insecure or worrying.
- Individual land titles are the most common documentation (just over one third), but almost as many households have informal papers or none at all.
- Those with formal and informal individual land titles have similar feelings about their land security; two thirds in each category

considering themselves to be secure.

However, three quarters of those with collective titles feel insecure.

- For land assignment, local sources of authority (papers from local lawyers or agreements from influential large-scale farmers) may be more important than formal titles from the government.

- Investments in land improvements, such as planting trees, soil and water conservation measures and the construction of a house can strengthen tenure security.

A lack of individual land titles does not necessarily mean that tenure is insecure. Similarly,

individual formal titles may not significantly strengthen tenure security as there are many other threats (such as inequality, poverty, a lack of enforcement, power abuses and use of violence). Perceived tenure security, rather than the formal legal situation, influences landholder choices in land investments, use and sales.

The research recommends:

- Policymakers must understand that providing formal land titles does not necessarily create security in Nicaragua.
- Better access to inexpensive legal advice is important for poor farmers to be able to defend their property rights.
- Future research should explore tenure security from the perspectives of the farmers involved to better understand the links between land tenure and investments amidst power abuse, conflicts and corruption.

### Rikke J. Broegaard

Roskilde University and the Danish Institute for International Studies, Strandgade 56, 1401 Copenhagen K, Denmark  
T +45 326 98787 F +45 326 98700  
rjb@diis.dk

'Land Tenure Insecurity and Inequality in Nicaragua', *Development and Change* 36 (5), pages 845-864, by Rikke J. Broegaard, 2005



## Stronger land rights improve forest management in Indonesia

**Indonesia's remaining forests face many threats: illegal logging, fires and conflict over land rights and ownership of 'common' forest land. Local people have seen the national government give rights to use forest to large industries, who often exploit these resources illegally.**

Land classified as 'Forest Zone', which is controlled by the government, covers 62 percent of Indonesia. However, research by Forest Trends, USA, and the World Agroforestry Centre shows that large areas of this land is not actually forest but used for agriculture, including agroforests growing rubber, cinnamon and fruits trees.

There is no overall forestry strategy for the country and laws governing land rights are complex: ownership areas often overlap, laws are contradictory and often they are not enforced. This means that communities often lose out to powerful political and industrial players who can use uncertainties in land laws to their advantage. Many communities resent this situation, resulting in violent protests and aggressive responses by the government.

The potential of community land ownership to contribute to poverty alleviation and sustainable natural resource management has become more widely acknowledged during the last decade. Land rights bring self-reliance and negotiating

power to communities. This reduces vulnerability and increases incentives to invest in land.

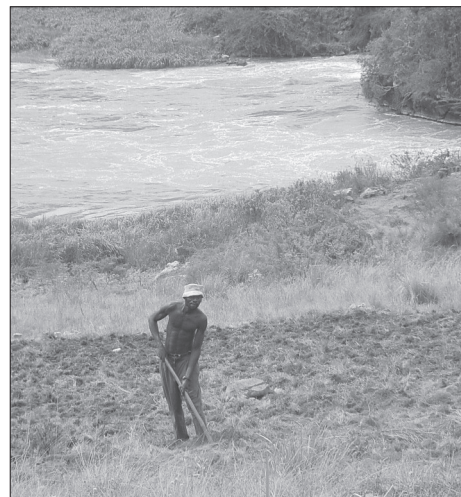
Several factors inhibit the successful transfer of land rights in Indonesia:

- conflicting land laws and regulations cause confusion
- many government officials feel threatened by the idea of community decision-making
- there is little coordination between ministries and departments with relevant responsibilities
- knowledge of land use in the forest zone is poor: previous assessments have treated them as places without people.

Forest management by the central government has failed to conserve Indonesia's forests or benefit people living in or near them. Attempts to decentralise management has complicated an already confused and corrupt legal system. Transferring land ownership rights to local communities could improve both the management of forests and the country's economic development.

The research recommends:

- Reform the confusing regulations that govern land tenure and transfer current rights that are clearer.
- Reclassify land in the 'forest zone' that is not natural forest. There are no legal barriers to this and the Indonesian land agency has recent positive experience that will be useful.
- Award long-term leases to communities who want to use resources rather than just own the land. Extending these will depend on good management practises to encourage sustainable management.
- Define community lands using methods such as community mapping. This will help to reduce conflict over ownership by



**A man in Uganda cultivates land by the River Kagera. Environmentalists have expressed concern about the deteriorating water quality of rivers due to siltation. This is blamed on agricultural activities on the river's banks.** © 2005 *The New Vision*, Courtesy of Photoshare

enabling local people to determine who owns what.

- Introduce policy changes to areas where they are most likely to be successful. This will raise the profile of community ownership, increasing support elsewhere.

**Arnoldo Contreras-Hermosill and Chip Fay**  
Chip Fay, World Agroforestry Centre, J1 CIFOR Sindang Barang, P.O. Box 161, Bogor 16001, Indonesia  
T + 62 251 625 415 F + 62 251 625 416  
c.fay@cgiar.org

*Strengthening Forest Management in Indonesia through Land Tenure Reform: Issues and Framework for Action*, Forest Trends: Washington DC, by Arnoldo Contreras-Hermosill and Chip Fay, 2005 (PDF)  
[www.forest-trends.org/documents/publications/IndonesiaReport\\_final\\_11-4.pdf](http://www.forest-trends.org/documents/publications/IndonesiaReport_final_11-4.pdf)

## Rwandan orphans denied land rights

**The genocide in 1994, combined with the impacts of HIV/AIDS, has created thousands of orphans in Rwanda. These orphans – many the heads of households – urgently need land use rights. A weakened system of guardianship and increasing pressures on land often prevent this.**

There are 34 million orphans in Africa, 11 million of who are 'AIDS orphans'. Many orphans are poorly cared for and subject to abuse and exploitation. Traditional support systems for orphans in Africa, whereby family members were expected to take care of and defend the rights of orphans, have weakened over the years. Governments have been unable to respond with adequate formal legal and social systems.

The situation is particularly acute in Rwanda, where the genocide of 1994 and a deepening AIDS crisis have created up to 300,000 orphans. Even before the Rwandan genocide, land pressures and poverty meant that many families were competing for land. The genocide, with over 600,000 Tutsi and Hutu deaths and an estimated 4

million refugees, led to a larger-scale land crisis. The crisis has only worsened with the increase in AIDS orphans.

Research from Carnegie Mellon University, USA, looks at the current status of orphans in Rwanda with regard to land rights. Key findings include:

- Many orphans are heads of their households, yet their land rights are often neglected.
- Guardians do not always respect or recognise orphans' land rights. Following the war in Rwanda there have been many cases of guardians taking advantage of orphans.
- The existing customary and national laws and policies provide little support for orphans, despite the Rwandan Civil Law on Property in 2000.
- Orphans experience many practical barriers: these include a lack of information; time (for example with orphans returning after the war to find their land taken over); status; few financial resources to administrative and legal forums to defend their land rights.

These factors have led to considerable frustration for orphans who, as head of households, are struggling to survive. The research recommends that the Rwandan government recognise the changing nature of guardianship by:

- developing a legal framework that includes the concept of 'active legal capacity', especially for minors, so orphans are granted legal rights based on their maturity and need to be independent, rather than age
- formulating and enforcing land laws specifically catering to orphans' rights, as separate from adult rights
- better regulating and supporting traditional guardianship for orphans
- implementing new forms of care-giving that also provide orphans with access to information and legal and administrative aid
- evaluating orphan intervention programmes, such as those involving community volunteers to work on orphans' fields (this has been used in other African nations)
- broadening the definition of 'family' in post-war Rwanda, for example through 'children's villages'
- designing national land development programmes with the full participation of orphans.

**Laurel L. Rose**  
Philosophy Department, Carnegie Mellon University,  
Forbes Avenue, Pittsburgh, PA 15213, USA  
laurel@andrew.cmu.edu

'Orphan's Land Rights in Post-war Rwanda: the Problem of Guardianship', *Development and Change* 36 (5), pages 911-936, by Laurel L. Rose, 2005

## Bringing the earth back to life in Western Kenya

**The Western Kenyan highlands are one of the poorest regions in the world, with low agricultural yields and widespread poverty. Many experts believe restoring soil fertility is vital for improving agricultural production.**

Western Kenya is one of the most densely populated areas in Africa. There are many small farms, where low investment means low crop productivity. Several studies by governmental and non-governmental organisations (NGOs) indicate that improving soil fertility will increase agricultural production and incomes.

Research coordinated by the International Food Policy Research Institute, USA, looks at different soil fertility replenishment (SFR) systems, such as 'improved fallow' systems and biomass transfer systems. The World Agroforestry Centre, Wageningen University, and the University of Nairobi, Kenya, all collaborated on the research. The study compares the rates at which different communities adopt these practices and the extent to which this reduces poverty. The researchers also examine the role of government agencies and NGOs in helping farmers to understand and use these techniques.

Improved fallow involves planting a species for its soil improving characteristics,

often a nitrogen fixing plant, and following it with a crop at the same site. With biomass transfer systems, farmers grow plants that are a source of organic nutrient in one place and then transfer the nutrients to crops in another place.

Key findings include:

- Households saw the importance of SFR for its low costs and improved crop yields, and many acquired knowledge of the system and other farming practices.
- Low and high income groups both use these systems in similar ways; about 20 percent using either of them regularly. However, small farm size limits the positive impact of SFR.
- The average area under SFR remains small after six years of promoting the techniques. This indicates that short-term improvements in production do not automatically translate into long-term improvements in living standards.
- Different methods of spreading SFR information have different impacts. For example, group-based methods disadvantage women and farmers with low social status, as they are less willing or able to participate.

SFR techniques can improve agricultural production. However, the partial success in Western Kenya shows that SFR must be part of a broader strategy. Policies to reduce poverty should also consider other factors that determine farmers' decisions (such as farm size) and examine how new

**Soil fertility replenishment techniques can improve agricultural production. However, these must be part of a broader strategy**

techniques are introduced into communities and how their use is sustained. The researchers recommend:

- using a range of methods to spread new technologies or knowledge to reach a wide range of people
- monitoring SFR programmes to identify problems in spreading information, such as village dynamics or the limited resources of local administrations
- introducing SFR techniques in combination with low-cost initiatives to increase agricultural productivity, such as disease-resistant maize varieties, higher value crops (such as kale) and greater investment in other enterprises such as poultry or fruit
- improved access to credit so that poor farmers can invest in assets to protect themselves from risks
- paying attention to the relationships that develop between farmers, technology designers and the people who spread them, as these relationships are crucial to the success of SFR projects.

**Frank Place, Michelle Adato, Paul Hebinck and Mary Omosa**

Frank Place, International Center for Research in Agroforestry, United Nations Avenue, Gigiri, PO Box 30677, Nairobi, Kenya  
**T** + 254 20 722 4000 **F** + 254 20 722 4001  
**f.place@cgiar.org**

*The Impact of Agroforestry-Based Soil Fertility Replenishment Practices on the Poor in Western Kenya, Research Report 142, IFPRI: Washington DC, by Frank Place, Michelle Adato, Paul Hebinck and Mary Omosa, 2005 (PDF)*

**www.ifpri.org/pubs/abstract/142/ab142.pdf**

## Challenges with property rights for improving access to water

**Recent water debates have focused on personal and domestic use, but water used for agriculture gets less attention. Projects to improve access to water for agriculture often fail to consider property rights issues. This can undermine land tenure security, contribute to resource loss and create conflict.**

Rain-fed farming and pastoralism are the main forms of agriculture in Sahelian countries. In the past few decades, there have been efforts to improve the water infrastructure in rural areas – for example through new water points and irrigation schemes.

Research from the International Institute for Environment and Development, UK, explored land and water rights issues for water projects in the Sahel. The research focused on irrigation schemes and pastoral water points in Burkina Faso, Mali, Niger and Senegal, as well as on projects to improve wetlands management.

Land and water rights are closely linked in irrigation schemes. Many farmers have insecure land use rights and these have

several conditions attached. For example, if farmers do not pay water fees they are evicted from the land. This creates incentives for farmers to pay fees, which is good for a scheme. But during bad harvests, farmers may lose land they have cultivated for generations without receiving compensation. Farmers need fee-payment mechanisms that cater for harvest fluctuations, such as rescheduling payments in bad years, or enabling them to rent out land.

Other key research findings include:

- New irrigation schemes usually suppress existing land rights and reallocate land and water rights. New users may or may not be the original rights holders.
- New schemes require mechanisms that prevent local elites from using irrigation projects to strengthen their land claims to the detriment of others.
- In pastoral systems, people who control water points can regulate access to surrounding grazing lands. New public water points have often attracted increasing numbers of herders and undermined the land and water use rights of local communities.
- Local elites dig private pastoral wells or take over public ones as a strategy to grab common resources and secure exclusive land and water use rights.
- Wetlands create tension between competing users and management authorities. They are also a focus of resource and revenue grabbing by powerful elites, such as customary chiefs.

Recent laws on administrative decentralisation may contradict land and water laws. There is still a significant gap between government legislation and local practice, despite government efforts to regulate resource access and management in publicly-funded water infrastructure schemes.

Property rights issues must be taken seriously in programmes to increase water security. Solutions must fit with current legislation and be acceptable to local users. Considering this, practitioners and policymakers must:

- consult local users when designing and implementing water programmes
- act on the basis of a solid understanding of local resource tenure systems
- consider land tenure issues in decisions concerning water infrastructure
- give smallholders new land and water rights options that offer greater tenure security
- ensure harmonious coordination between laws governing land and water rights, and between these laws and legislation on decentralisation.

**Lorenzo Cotula**

International Institute for Environment and Development, 3 Endsleigh Street, London, WC1H 0DD, UK  
**T** +44 (0)20 7388 2117 **F** +44 (0)20 7388 2826  
**Lorenzo.cotula@iied.org**

*Land and Water Rights in the Sahel: Tenure Challenges of Improving Access to Water for Agriculture, IIED Drylands Issues Paper 139, IIED: London, edited by Lorenzo Cotula, 2006 (PDF)*

**www.iied.org/pubs/pdf/full/12526IIED.pdf**

# Alternatives to slash and burn agriculture in Bangladesh

**In the Chittagong Hill Tracts of Bangladesh, a distorted form of slash and burn agriculture, characterised by short rotation, has led to serious degradation of land and forests. Indigenous people have been blamed for the problem. However, this assessment ignores historical reasons for this type of farming and the current obstacles to adopting more sustainable land use practices.**

Slash and burn agriculture, locally known as *jhum*, is practiced widely in the Chittagong Hill Tracts. It involves clearing a patch of land and farming it for one or two seasons before moving to another plot. Traditional slash and burn agriculture, with long fallow and short cropping periods, has been practiced sustainably by tribal communities in the region since the early nineteenth century.

However, government policy during the British, Pakistani and post-independence periods, has been significant in altering land use. Research from the International Centre for Integrated Mountain Development, Nepal, argues that government policies, both past and present, have forced farmers

to shorten fallow periods on increasingly poor land. The shortening of the fallow period – the time allowed for farmed land to recover after use – and the use of poor lands has led to significant deforestation and degradation of land in the region.

Government efforts to encourage alternatives to *jhum* (such as horticulture and tree farming) have only had partial success. This is largely because of insecure land tenure and insufficient marketing and transport support services from the government.

Key factors behind land degradation in the Chittagong Hill Tracts include:

- during the British period, the nationalisation of land and forests (reducing land available for *jhum*) and the start of large-scale commercial logging
- during the Pakistani period, continued commercial extraction of forest products through the establishment of reserve forests, which blocked traditional tribal access
- the construction of a hydroelectric dam that flooded the most fertile parts of the region, forcing farmers to move to poorer lands
- following independence, the resettlement of lowland people (up to 200,000 in 1992), leading to population pressure, a drastic reduction of the fallow period and further cultivation of poor lands by

farmers seeking to avoid food shortages. Rather than blame indigenous people for the damage caused by slash and burn agriculture, the Bangladeshi government should consider the reasons why people still practise this form of

agriculture. The researcher recommends policies to promote economically and environmentally viable land use practices, including:

- providing land tenure to farmers
- removing formal and informal taxes that increase marketing costs

for farmers and discourage them from adopting alternative land uses

- adjusting rules that make it difficult for small farmers to harvest and market timber grown on private farmland
- promoting competition in trade and transportation to improve conditions for farmers and encourage tribal people to enter the trade and transport sectors
- making credit more accessible to farmers without land certificates
- involving local people in decision-making processes.

#### Golam Rasul

International Centre for Integrated Mountain Development, P.O. Box 3226, Kathmandu, Nepal  
T + 977 1 5525313 F + 977 1 5524509  
grasul@icimod.org

*State Policies and Land Use in the Chittagong Hill Tracts of Bangladesh*, Gatekeeper Series 119, IIED: London, by Golam Rasul, 2005 (PDF)  
[www.iied.org/pubs/pdf/full/14511IIED.pdf](http://www.iied.org/pubs/pdf/full/14511IIED.pdf)

**Government policies have forced farmers to shorten fallow periods on increasingly poor land. The shortening of the fallow period and the use of poor lands has led to deforestation and land degradation**

## useful websites

Drylands Research  
[www.drylandsresearch.org.uk](http://www.drylandsresearch.org.uk)

Eldis Pastoralism Resource Guide  
[www.eldis.org/pastoralism/index.htm](http://www.eldis.org/pastoralism/index.htm)

Food and Agriculture Organization – Land Tenure  
[www.fao.org/sd/in1\\_en.htm](http://www.fao.org/sd/in1_en.htm)

International Institute for Environment and Development  
Drylands  
[www.iied.org/drylands](http://www.iied.org/drylands)

International Land Coalition  
[www.landcoalition.org](http://www.landcoalition.org)

Land Tenure Centre  
[www.ies.wisc.edu/ltc](http://www.ies.wisc.edu/ltc)

Pastoral Development Network  
[www.odi.org.uk/pdn/index.html](http://www.odi.org.uk/pdn/index.html)

The Programme for Land and Agrarian Studies  
[www.uwc.ac.za/plaas](http://www.uwc.ac.za/plaas)

World Bank – land policies  
[www.worldbank.org/landpolicy](http://www.worldbank.org/landpolicy)

## Subscribe

*id21 natural resources highlights* are intended for people with limited internet access, and are free of charge. If you would like to subscribe, please send your contact details to the address below, telling us which topics you would like to receive: agriculture, conservation, fisheries, forestry, land, rural livelihoods and water.

**id21**

**Institute of Development Studies  
University of Sussex, Brighton, BN1 9RE, UK**

T +44 (0)1273 678787 F +44 (0)1273 877335 email [id21@ids.ac.uk](mailto:id21@ids.ac.uk)



*id21 natural resource highlights* are published twice a year by id21 on agriculture, conservation, fisheries, forestry, land, rural livelihoods and water. Please feel free to photocopy and distribute them to your colleagues. Visit the id21 website for the full range of over 3000 research highlights. These highlights are also available as PDF versions from: [www.id21.org/publications/index.html#natural\\_resources](http://www.id21.org/publications/index.html#natural_resources)

id21 is hosted by IDS and supported by the UK Department for International Development. Views expressed here do not necessarily reflect those of DFID, IDS or any other contributing institution. IDS is a Charitable Company no.877338 limited by guarantee and registered in England.

© Institute of Development Studies 2006  
ISSN 1746-8655  
Printed on paper produced from sustainable forests



**DFID**