



Win-win solutions for dryland Africa

An ILRI project in East Africa made a huge difference to the livelihoods of people, their livestock and wildlife. Research enabled their competing needs to be balanced in new ways. A resultant scientific paper won the Ecological Society of America's 2012 Sustainability Science Award. So, what was so special about this work and what are its wider implications?

The Reto-o-Reto project

The [Reto-o-Reto project](#) (*I help you, you help me* in the local Maasai pastoralists' language), implemented between 2003 and 2008, aimed to help balance action on poverty alleviation and wildlife conservation in four pastoral ecosystems in East Africa. One of these was the Athi-Kaputiei Plains, which lie just to the south of the world-famous Nairobi National Park – long celebrated for its lions and herds of zebra, wildebeest and antelope. Lessons from the project supported the development and adoption of a pioneering land-use master plan for the area which is now helping Maasai pastoralists better manage their land, livestock and wildlife resources.

For the pastoralists of the Athi-Kaputiei Plains the drought of 2009–2010 was one of the worst in living memory. 'Many people lost almost all their livestock,' says pastoralist William Kasio. 'The vultures were so full they couldn't eat any more. Even the lions had had enough.'

At the local slaughterhouse, over 20,000 emaciated cattle were burned and buried during the drought, and the surrounding plains were littered with sun-bleached carcasses. For the Maasai, droughts are nothing new, but many believe there is an even graver threat to their survival as cattle herders. 'Land sales and the subdivision and fencing off of open land—that's been the biggest problem we've faced in recent years,' says Kasio, chairman of a marketing organisation based at the slaughterhouse.

Conflicts between conservation and development

A generation ago, livestock and wildlife ranged freely across the plains. Today, their movements are hindered by fences; roads, quarries, cement works, flower farms and new buildings. If the development trends of the past decade continue, then the pastoral way of life, and the great wildlife migrations in and out of Nairobi National Park, could become little more than a memory. But now, thanks to a community-inspired planning exercise, there's a good chance this will not happen.

The Athi-Kaputiei land-use 'master plan', launched in 2011, provides the local council with the legislative teeth it needs to ensure that large expanses of land remain free of fencing and that new developments are confined to specific areas.

The master plan is the culmination of years of research and discussion involving local communities, the council, central government and a range of organisations involved in conservation and animal husbandry.

Since 2004, teams of young Maasai have helped to draw up maps, which illustrate the scale of land sales and the loss of open rangeland. Managed by ILRI, the mapping programme and the associated research showed just how rapidly life has changed on the plains over recent years. It provided much of the data used in the master plan.

At the end of the 19th century, the Athi-Kaputiei Plains were said to boast the most spectacular concentration of wildlife in East Africa. In those days there were four times as many wild herbivores as there were cattle. Now the reverse is true, with the wildlife beating a steady retreat.

Between 1977 and 2002, the wildlife populations in the plains to the south of Nairobi National Park fell by over 70%. Particularly hard hit were migratory animals such as wildebeest, which traditionally graze in the national park during the dry season and move south in search of new pasture during the wet season. From nearly 40,000 migrating animals in the 1970s, wildebeest numbers have fallen to about 1,000 today.

What's causing the problem?

ILRI research suggests that two factors are to blame: poaching and the loss of habitat and open space. The sub-division of land, frequently followed by the erection of fences, has also made it harder for the pastoralists to move their animals around in search of water and fresh pasture.

Even before ILRI produced its first maps, conservationists realised something had to be done to keep the migratory routes open. A Wildlife Conservation Lease Program, launched in 2000, encouraged pastoralists to keep their land open by paying them 300 shillings (USD 4) per acre per year. By 2010, 275 families, owners of some 30,000 acres, had signed up.

'The lease scheme is helping to protect one of East Africa's five great migratory routes, but it isn't enough on its own to prevent further losses of wildlife', says Jan de Leeuw, former head of ILRI's pastoral livelihoods group. 'The master plan will certainly help and it's a very important step towards improving the management of the plains, but it's also imperative that we improve the financial situation of the pastoralists to a level where they become the champions of conservation.'

Lions, rhino, giraffe and zebra

This is one of the few places in the world where you can see major wildlife populations, including lions; rhino, giraffe, zebra, wildebeest and various antelope grazing, hunting and being hunted against the backdrop of a populous city, often in the company of Maasai cattle. Little wonder, then, that there are conflicts between conservation and development, and sometimes between wildlife and the Maasai. Some of these conflicts will persist—the locals are deeply concerned, for example, about the building of a new town for Nairobi slum-dwellers—but the master plan provides the local council, for the first time, with the means to control development. 'I'm very optimistic,' says Councillor Kisemei from the local county council. 'I think the master plan will help us to secure the future for the Maasai and for the wildlife. And if we succeed, it will provide a model which could be used in other areas where wildlife and humans live close together.'

Applying the lessons learned

Indeed the lessons learned from this work are helping to shape a major new dryland agriculture initiative - [Integrated](#)

[and Sustainable Agricultural Production Systems for Improved Food Security and Livelihoods in Dry Areas](#). The program is led by ILRI's sister institute, the International Center for Agricultural Research in Dry Areas (ICARDA).

The dry areas of the developing world occupy about 3 billion hectares and are home to 2.5 billion people: 41% of the earth's land area and more than one-third of its population; 16% of this population lives in chronic poverty. Drylands face serious environmental constraints, which are likely to worsen as a result of climate change.

The drylands program plans to work in six East and southern Africa countries, including the area to the south of Nairobi National Park which was the focus of the award-winning Reto-o-Reto project.

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July 2014