



Sustaining communities, livestock and wildlife

A DECISION SUPPORT TOOL



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Food and Agriculture Organization of the United Nations in collaboration with
the African Wildlife Foundation (AWF), the International Livestock Research Institute (ILRI),
the United Republic of Tanzania on a Global Environmental Fund (GEF) and the World Bank

Rome, 2009

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This guide is designed to help communities and policy-makers at all levels make informed choices regarding land use, business ventures, and public policy in pastoral areas, particularly the Maasai Steppe and other semi-arid parts of East Africa.

This decision support tool, *Sustaining communities, livestock and wildlife* stems from work by the Food and Agriculture Organization of the United Nations (FAO), the African Wildlife Foundation (AWF) and International Livestock Research Institute (ILRI) and the United Republic of Tanzania on a Global Environmental Fund (GEF) project called "Novel forms of livestock and wildlife integration adjacent to protected areas in Africa - Tanzania."

Livestock and wildlife have coexisted for thousands of years: as one of the world's richest wildlife areas, the Maasai Steppe is living proof that traditional pastoral strategies sustain wildlife as well as livestock.

Today an estimated 70 percent of wildlife spills out of nearby protected areas Tarangire and Manyara National Parks for at least part of the year, to graze on community land.

Wildlife in turn supports tourism industries worth billions of US\$ in East Africa. But a mosaic of government policies, population growth, land pressure, and changing patterns of climate and livestock disease

have come together recently to alter the landscape of the Maasai Steppe and other pastoral areas.

Formerly nomadic herders are settling and becoming agro-pastoralists, and subsistence and commercial farmers are plowing the rangeland that sustained both livestock and wildlife. Conflicts are emerging between farmers and herders; wildlife and people; newcomers and traditionalists. Numbers of livestock per capita is falling.

And both Tanzania and Kenya have lost more than half their wildlife in the last 30 years.

The GEF project addressed these issues and offered six villages in the Maasai Steppe support in land-use planning, creation of businesses based on wildlife, formation of Wildlife Management Areas, conflict management, and livestock health – all designed to help people thrive with both livestock and wildlife.

FOR WHOM IS THE DECISION SUPPORT TOOL INTENDED?

The tool is intended for practitioners working on participatory natural resource use and management. It will be useful for district and village officers, the private sector and government representatives, NGOs and development agencies involved in the processes of land-use planning and natural resource management.



OBJECTIVES

Purposes of this decision support tool include:

- To enable policy-makers and community members to better understand how and why the physical landscape of East Africa is changing, particularly in pastoral areas of Tanzania and Kenya.
- To provide how-to guidance on land-use planning, both at national and local levels.
- To offer fresh ideas and possibilities for conservation-based businesses that work in livestock/wildlife areas, so that communities can make a better living in their traditional areas.
- To help guide communities, and outside facilitators, through the processes of managing conflicts over land use; developing community-based nature conservancies (particularly Wildlife Management Areas in Tanzania); and managing livestock health in areas rich in wildlife.
- To offer a repository of lessons learned and methods developed under the project and beyond.

WHAT IS IN THE DECISION SUPPORT TOOL?

The guide features six modules offering suggestions, steps, and experience to other communities facing similar challenges of livelihood change and co-existence with wildlife.

Module 1. Land-use planning: an introduction for policy makers

Module 1 aims primarily to help regional and national policy-makers understand the dynamics of land-use

change in pastoral/wildlife areas. It introduces the essentials of large-scale land-use planning, the importance of envisioning a more sustainable and equitable future, and how modeling can help people see how different scenarios for land use might develop. Examples from Tanzania and Kenya show dramatically what is happening on the ground and make the case for urgent, inclusive land-use planning.

Module 2. Mapping our community's future: why and how to practice participatory land-use planning

Module 2 introduces how a community can dream and plan its own future. It features exercises to include all stakeholders in designing a better way to share land and reduce conflicts over resources. Required by law for communities to benefit from conservation-based businesses (see below), participatory land-use planning can also be a learning experience for all stakeholders, and a practice in empowerment.

Module 3. Wildlife can work for you: creating a conservation-based venture (CBV)

When communities bear the costs of living with wildlife, it is only fitting that they reap benefits as well. But until recently nearly all income from tourism and other nature-based businesses went to tour companies and governments. A new breed of non-governmental organization and investor are teaming up to make sure that local businesses benefit local people and make it worth their while to sustain the wildlife around them.

NOVEL FORMS OF LIVESTOCK AND WILDLIFE INTERACTIONS ADJACENT TO PROTECTED AREAS IN AFRICA-TANZANIA

The *Novel Forms of Livestock and Wildlife Interactions Adjacent to Protected Areas in Africa-Tanzania* (2005-2009), is a GEF/World Bank funded project implemented by the Food and Agriculture Organization (FAO), African Wildlife Foundation (AWF), International Livestock Research Institute (ILRI) and the Government of Tanzania. This project is being implemented in the Tarangire-Manyara ecosystem within the Monduli and Simanjiro Districts.

The project aims at the conservation of globally significant biodiversity, with improved ecological integrity, conflict resolution, food security and poverty alleviation.

A major objective is to support the development of policy and institutional framework to significantly reduce conflict over access to resources through the integration of pastoralism, cropping, and wildlife conservation.

The project is exploring and understanding the dynamics of land use in the project area with the aim of utilizing this knowledge to improve returns to stakeholders from both wildlife and livestock simultaneously. This is being achieved through the development and implementation of land use plans and establishment of benefit-sharing mechanisms from wildlife, such as community-managed business ventures and the development of decision support tool to strengthen resource access and management.

Module 3 gives communities concrete steps and examples of CBVs that can work for them.

Module 4. Wildlife Management Areas (WMAs): benefits, challenges and steps

Wildlife Management Areas are community owned conservancies. In Tanzania, they are the government's preferred way for communities to manage and benefit from their own wildlife. Rules are still in flux, though, and preparing a WMA is complicated and expensive. WMAs might become more attractive, though, if they allow communities to control lucrative hunting rights when hunting concessions come up for renewal in late 2009 – or if the government streamlines the process.

Module 5. Conflict in community: managing conflicts in areas with livestock, farming and wildlife

Conflicts are never in short supply where people are trying to herd, farm, fish, hunt, host tourists, and conserve wildlife in the same area. Module 5 presents time-honoured principles of safeguarding relationships while managing conflicts in communities. Modern methods of mediation and management often harken back to traditional conflict-management customs, and both can work.



Module 6. Managing livestock diseases near wildlife sanctuaries in East Africa

One of the challenges of living with wild animals is the fact that they sometimes harbour diseases that jump to livestock or even people. In addition, climate change and land squeeze are contributing to an upsurge in several major diseases in pastoral areas. Module 6 shares important facts and updates and gives tips on prevention that communities and policymakers can implement.

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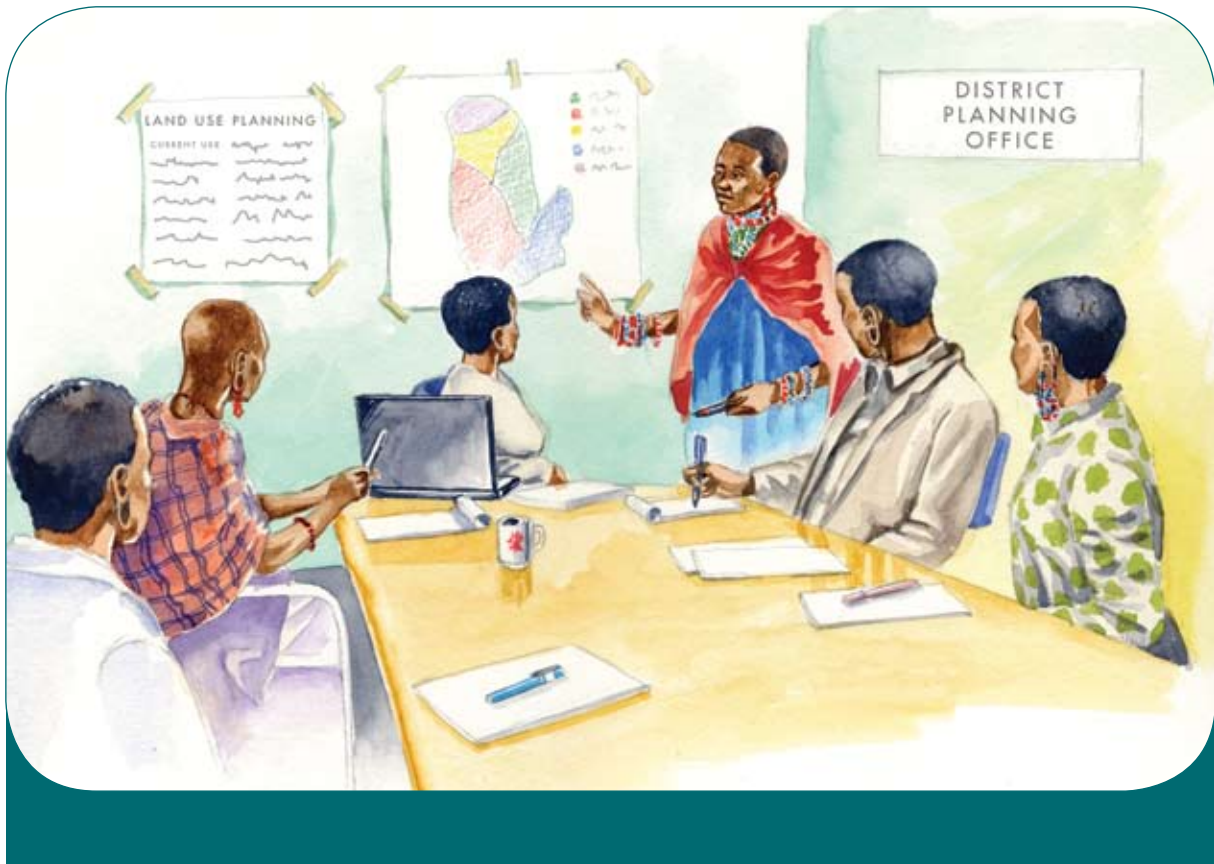
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Land-use planning: an introduction for policy makers



WHY LAND-USE PLANNING?

Wherever people use land, land-use is being planned, consciously or not.

Policy-makers and the rest of us, have an interest in planning deliberately and democratically so that land use enhances local and national goals including rural development, wealth creation, food security, sustainability of resources and equity.

Ideally, land-use planning is a countrywide effort, from grassroot villages through districts and provinces, harmonizing local needs with national priorities (Box 1).

In practice, it tends to get scant attention. For instance, an official objective of the Government of Tanzania is for all districts to have their own land-use plans, including all villages, by 2010. However as of 2009 only an estimated 1,000 villages out of a total of 8,000 have such plans.¹

Yet planning is no luxury: it is essential to achieving national as well as local objectives. For instance, official Tanzania goals include:

- increasing the returns from livestock;
- increasing returns from wildlife through tourism;

BOX 1. EFFECTIVE LAND-USE PLANNING

- Addresses local conditions in both process and content.
- Considers cultural viewpoints and builds on local environmental knowledge.
- Takes into account traditional strategies for solving problems and conflicts.
- Understands rural development to be a "bottom-up" process based on self-help and self-responsibility.
- Becomes a dialogue among stakeholders, rather than an imposed solution.
- Leads to improvement in the capacity of participants to plan and to act.
- Requires transparency and free access to information for all participants.
- Is sensitive to gender and all stakeholder needs.
- Is flexible, responsive to findings and changing conditions.
- Is geared to implementation.

Source: GTZ, 1999

¹ The total number of villages has since expanded to around 10,000 (IUCN, 1996).

Introduction

- increasing agricultural yields; and
- supporting rural livelihoods.

Kenyan goals likewise emphasize increasing returns from tourism and wildlife, agriculture, and livestock.

Since land is not growing, only careful planning that fits the best use to each piece of land can give us hope of achieving all of these goals for land use.

WHY THIS MODULE?

Currently, however, land-use is often based on short-sighted and individual goals; policies that may not encourage sustainable use; and expediency rather than research.

This module introduces basic concepts and steps of effective, macro-level planning. It emphasizes that land-use planning is a multi-faceted exercise that works best when taking into account:

- present trends;
- options for possible future scenarios;
- needs, interests, and capacities of all stakeholders; and
- meshing local and national interests.

And it highlights research findings on current land-use trends in East Africa.

NATIONAL-LEVEL LAND-USE PLANNING: SOME BASIC STEPS FOR THE POLICY-MAKER

1. The first is to squarely face what is happening, where, and why (see below for analysis of regional trends).
2. Then project, or even just imagine, the current trends continuing five, ten, twenty, fifty years into the future. Would these trends produce a result we would want to see?
3. Visioning is critical. What in fact DO we want to see? Tanzania's MKUKUTA and Kenya's Vision 2030 are national-level visions, but there is much work to do to concretize them at local levels, harmonized with local aspirations.
4. Models and scenario-building. With the help of computer models that help predict trends, scenario-building helps to assess threats, opportunities and trade-offs of various options. Scenarios can spark discussion of possible interventions and their impacts from the village to the regional to the global level (Box 2).
5. What plans and policies could be developed to achieve scenarios with a positive influence on livelihoods, conservation and future well-being?

6. Bear in mind that plans are not set in stone: they are like hypotheses. They can and should be tested, shown to be right or wrong, and revised as necessary.

Vital questions to explore land-use change

In the 21st century, human land use is the main factor responsible for ecological change at both local and global scales. Exploring the following questions can help policy-makers understand how land-use is changing, and where the changes may be leading.

1. How is land-use changing? (What is happening?)
2. Which environmental and cultural variables are contributing to land-use change? (Who and why?)
3. Which locations are affected by land-cover changes? (Where?)
4. How fast is land-cover changing? (When?)
5. What are the impacts of these changes on pastoral livelihood and wildlife? (So what?)

As human populations and national economies continue to grow, land-use pressure will not abate in the near future. The pressure will be especially intense in countries of great biodiversity, with rapid population growth and rapid landscape transformation.

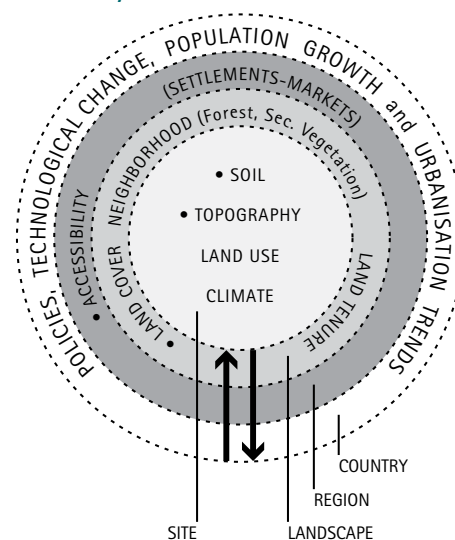
BOX 2. A USEFUL FRAMEWORK FOR MODELING LAND-COVER CHANGES

Of the many land-use change models, one in particular may be useful for considering large-scale planning in the East African context (Etter *et al.* 2006). This framework considers "drivers" of land-use change at four spatial scales: site, landscape, region and country.

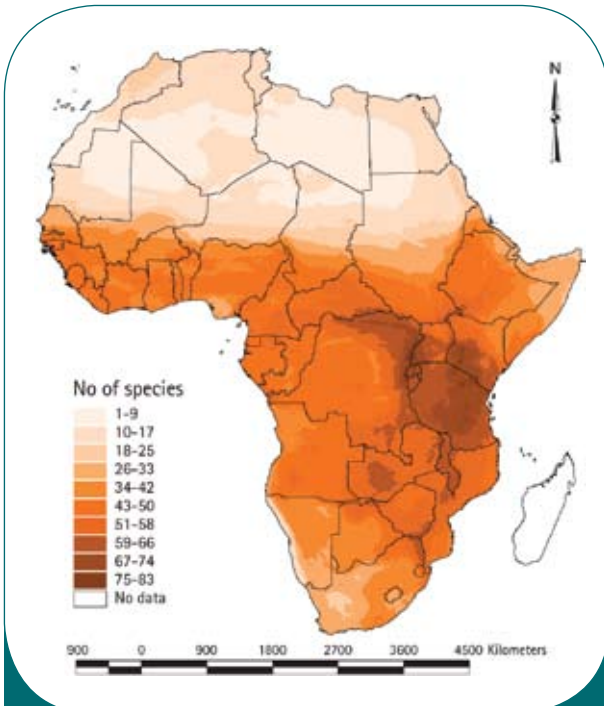
- **At the local site:** topography, previous land use and climate are the key influencers of land-use change.
- **At landscape scale:** land tenure, land cover and neighbourhood in the surrounding areas are the key drivers.
- **At regional level:** Accessibility to services and markets are key drivers.
- **At the country level:** population growth, policies and technological changes come more into play.

Further, the drivers can be divided into endogenous: Present on site (e.g. soil, hydrology, neighbourhood) and exogenous: Influences from outside (e.g. policies, technology, distance, transport costs, and markets).

Drivers of land-cover change, from site to countrywide



Source: Etter *et al.*, 2006



MAP 1. MAP SHOWING THE DISTRIBUTION OF MAMMALIAN SPECIES RICHNESS IN AFRICA, HIGHLIGHTING HIGH NUMBERS OF SPECIES IN EAST AND SOUTHERN AFRICA

Key findings on land-use and land-use change in East Africa

People tend to prefer the same habitats as other large mammals: landscapes with reliable water sources and moderate rainfall. As human population grows, settlements and agriculture expand through the most desirable areas, and then push into increasing marginal territories. In East Africa, this means settlements and farms moving into semi-arid and arid areas that are not only wildlife rich, but have been the traditional home of pastoralists (Box 3). Conflict arises as people clear land for cultivation, destroying wildlife habitats and livestock grazing areas.

Extensive research in the region – in the field, from satellite mapping, and computer modeling – points up the following information to inform effective land-use planning.

1. **Human population is growing fast.** Tanzania's population shot up nearly five times, from 8 million people to 38 million since independence. Kenya's population, too, grew from 8 million in 1960 to 39 million today: nearly a five-fold increase. Rapid urbanization in capital cities as well as towns and smaller trading centres in the rural areas is a related trend. While slower than in the past, population is set to double again in the next three decades.

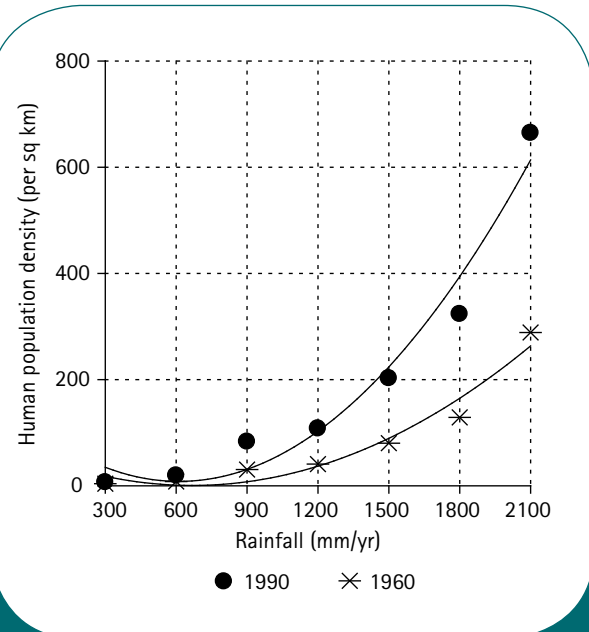


FIGURE 1. DENSITY AND DISTRIBUTION OF HUMAN POPULATION IN EAST AFRICA DURING 1960 AND 1990

2. **Rangeland is becoming farmland.** Partly because of population growth and the need to grow food for urban areas, rangelands are rapidly being converted to farms throughout East Africa including in areas with poor soils and frequent drought. This transformation, and the attendant settlements and fences, limit the mobility of herders, livestock, and wildlife.
3. **Conversion to agriculture is proceeding fastest in areas with highest rainfall,** where farming is most workable and profitable (Map 2). Spatial analysis reveals that in East Africa, land conversion is also most rapid near rivers, roads, towns and national park boundaries.
4. **Climate change is bringing more frequent drought.** Droughts and other weather extremes are becoming more frequent, making most types of land use – particularly agriculture – more difficult. Drought is likely to accentuate the already present conflicts among and between farmers, herders, other land developers, and wildlife. In addition, increases in temperature are causing drier habitats that can further reduce forage for both livestock and wildlife (Ogutu *et al.*, 2007; Beehner *et al.*, 2006).
5. **Pressed by the above trends as well as land tenure policies, formerly nomadic pastoralists are settling.** Pastoralists who once herded livestock hundreds of kilometres a year are now commonly limited to a group ranch, a village, or even one plot in a village, as land is privatized and subdivided.

BOX 3. LAND-USE TRENDS IN THE TARANGIRE-SIMANJIRO ECOSYSTEM: WHAT'S HAPPENING? WHAT'S COMING?

Researchers conducted extensive fieldwork as well as statistical models of land use to study the dynamics of the last thirty years of unplanned agricultural conversion in the Tarangire-Simanjoro ecosystem (in Simanjoro and Monduli Districts).

They found that people were likely to turn rangeland into farmland in areas that receive relatively more rain, and/or are located:

- near a town
- near a road
- near a river
- or near a national park.

Other major findings include:

- Agriculture increased five-fold between 1984 and 2000 in the Tarangire-Simanjoro ecosystem, traditionally a pastoralist area rich with wildlife (Map 3). Cultivated hectares jumped from around 17,000 to about 88,000. And the rate of conversion has been growing exponentially, from 0.6 percent/year to 3 percent a year by 2000.
- 35 percent of the rangeland remaining in this ecosystem now has a medium, high, or very high probability of being converted to agriculture in the foreseeable future. Those probabilities are respectively 21, 10 and 4 percent.
- Conversion already seriously threatens three of the five wildlife corridors that remained in 2000. There were nine traditional wildlife routes in 1964.
- Wildebeest experienced a population decline of about 88% within a period of less than 15 years in the Tarangire-Simanjoro ecosystem, since their calving areas are now being farmed. (TAWIRI, 2001)

- Farming appears unsustainable in the Tarangire-Simanjoro soils. Fully 70 percent of acreage under the plow in 1984 had been abandoned by 2000, and nearly all of what was being farmed in 2000 was newly converted. The abandoned acreage was fit for neither livestock nor crops. (Msoffe, *et al.* in prep.)
- Climate is also unfavourable to agriculture here. An analysis of long-term rainfall patterns show that severe droughts arrive in one year out of three, though not in a predictable fashion. (Msoffe, *et al.* in prep, unpublished data). Future forecasts of climate warming and substantial reductions in rainfall in East Africa (Hulme 2001; Thuiller *et al.* 2006; Ogotu *et al.* 2008) imply further adverse effects of climate change on wildlife and in Tarangire-Simanjoro ecosystem.
- Recurrent droughts and diseases have contributed to the declining livestock economy over the years due to livestock loss and the unpredictable and erratic rainfall has limited their recovery.
- Human population has expanded exponentially in this region during the past 25 years, with an annual increase of 3.8% p.a. between 1978 and 1988 to 5.2% p.a. between 1988 and 2002.

Conclusions of the research include: Land use change is being driven by policies and land tenure, socio-economic (demography, micro-and macro- economics), biophysical and climatic conditions.

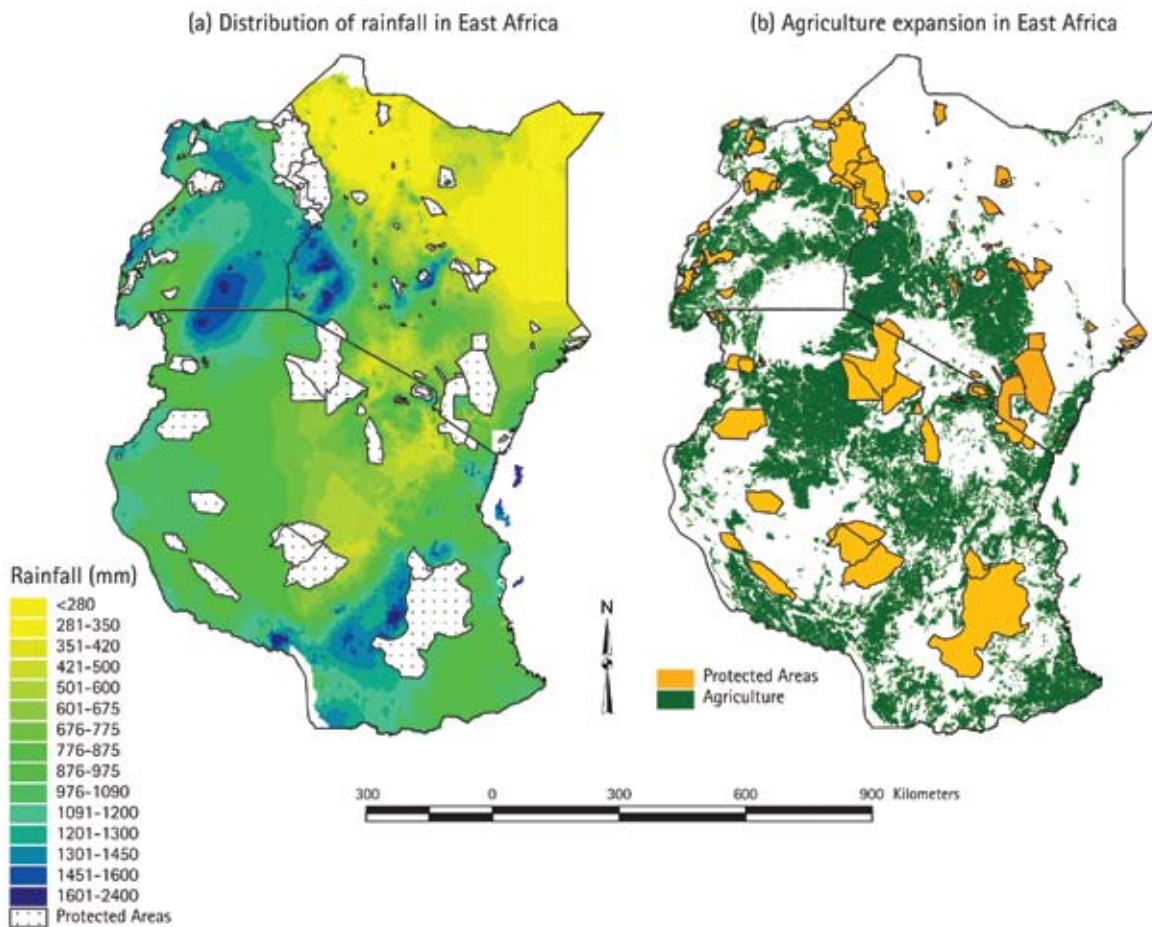
Reversing unsustainable cultivation and illegal use of wildlife in the study area would require rigorous land-use planning. In addition, community-based wildlife tourism projects could provide tangible benefits at the household level. Sustainable livelihoods need urgent support.

Adequate resources may not be available in that space, so pastoralists too are beginning to farm even in those semi-arid areas where pastoralism with mobility remains the most suitable land-use option (ACC, 2005; Reid *et al.*, 2003).

Pastoral landholders are also able to increase returns to land by investing in land development and production. Enabling these conversions are improved market and transport networks, information networks about market conditions, and access to financial services (Norton-Griffiths and Said, in press).

6. Contrary to popular perception, livestock numbers have not grown over the last couple of decades across the East African rangelands as a whole. Livestock has shifted location, however, with numbers increasing significantly in places of medium rainfall (500-800 mm) and decreasing in areas of higher rain. (Norton-Griffiths and Said, in press; GoK 1995; de Leeuw *et al.*, 1998).

Per capita, then, livestock has declined – particularly cattle. The pastoralist livelihood is becoming harder and harder to sustain, and pastoralists are among the poorest groups in East Africa.

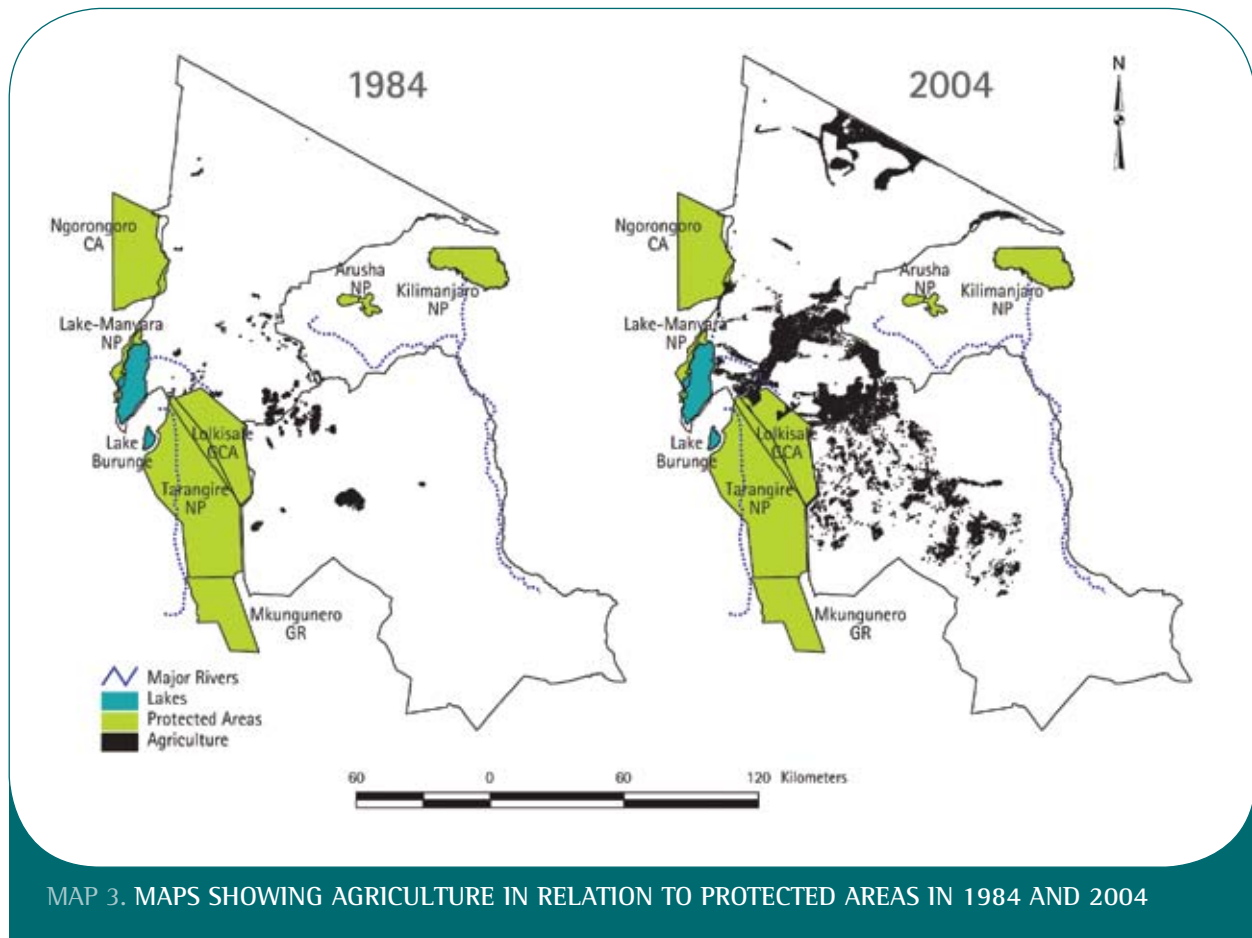


MAP 2. MAPS SHOWING RAINFALL AND AGRICULTURE IN RELATION TO PROTECTED AREAS

7. **Wildlife populations are dropping dramatically.** Due largely to unplanned conversion of habitat to farmland, East Africa has lost more than half of its wildlife in the last 30 years. The trend is continuing. In fact by some estimates, Kenya has lost more than 70 percent of all large mammals over the last 30 years. Of the 12 most common wild herbivore species surveyed, only ostrich showed no population declines in the past three decades (Norton-Griffiths, in press; GoK, 1995; de Leeuw *et al.*, 1998). Declines are high even in protected areas (Western *et al.*, 2007). The only places where wildlife is holding steady or increasing is on large private holdings, conservancies or group ranches that are profiting from tour operators (Norton-Griffiths and Said, in press). In Tanzania, the best scientific data likewise show wildlife sharply declining in all of the nation's major wildlife areas and ecosystems, including those with national parks and game reserves. Aside from giraffes and elephants, most large mammals

have seen widespread population declines since the mid-1980s. These losses are occurring despite about 30 percent of total land area is set aside as national parks, game reserves, and forest reserves (TNRF, 2008).

8. **Currently, wildlife at the local level cannot compete economically with agriculture.** Wildlife is being displaced mainly by land conversion to agriculture (Norton-Griffiths *et al.*, 2008; Ottichilo *et al.*, 2000; Serneels *et al.*, 2001). Economic analysis shows that in the current policy environment, farming reaps higher returns per hectare than wildlife even in areas that see the highest numbers of wildlife tourists (Norton-Griffiths and Said, in press; Norton-Griffiths *et al.*, 2008). Without policy change, economics will continue to drive out wildlife.
9. **Many national parks in East Africa are becoming "islands" in a sea of farms** (Map 3). Rapid land conversion around national parks sometimes reflects agricultural potential. But it can also reflect



communities' desire to prohibit any future extension of the parks into their land. Cultivating near park boundaries has severely restricted wildlife movement. It also points up the need to pursue land use that is profitable for communities and also compatible with wildlife. Complete loss of dispersal areas and corridors will reduce protected areas to ecological islands where sustainable conservation of wildlife species may not be possible even through active management strategies (Ottichilo *et al.*, 2000; Newmark, 1996).

10. Yet wildlife is one of East Africa's most valuable resources. In Tanzania it is the key attraction for a tourism industry that drew over 700,000 visitors in 2007, and over one billion U.S. dollars. Tourism in turn has been vital to economic recovery and growth of the past two decades. Visitors to Kenya totaled over two million in 2007, and accounted for about 12 percent of the Gross Domestic Product.

FROM THE CONSERVATION FRONTLINES OF KENYA

In another recent study, researchers calculated land returns for various uses in the Maasai Mara region of Kenya, based on land-cover observations and household surveys. (The Mara receives higher rainfall than the Tarangire-Simanjiro ecosystem, although it is not uniformly distributed. Results show that agriculture and livestock receive higher returns per hectare than wildlife and these differential returns create incentives to develop rather than conserve the land. They explain much of the pattern of land-use change in the Mara and other regions of East Africa (Norton-Griffiths *et al.*, 2008).

Unless local communities see that wildlife benefits them at least as much as farming, they will continue to farm and/or lease or sell their land to others who will farm, either for subsistence or commerce.

WMAs, conservation-based businesses, and payment for environmental services (PES) schemes are all methods to level the economic playing field and enable the survival of pastoralism and wildlife, before all since these two can survive together (Modules 3 and 4 address these further).

In the Mara, for instance, communities are partnering with private investors to set up reserves such as Olare Orok Conservancy (OOC). A wildlife conservancy next to

the Maasai Mara National Reserve, Olare Orok is owned by 154 Maasai landowners and covers an area of 23,000 acres of land. Formed in 2006, OOC is managed by Olpurkel Ltd, a private management company established by four tour operators who own camps in the conservancy.

Olpurkel Ltd leases the land from the OOC under a five-year agreement and is responsible for wildlife management and infrastructure development while guaranteeing a fixed monthly sum of US\$ 160 to each landowner with 150 acres of land.

Part of the agreement is also to use the conservancy as a livestock grazing grounds during dry seasons. This ensures that the local communities benefit from both conservation and pastoral livestock husbandry, still the economic mainstay of the local Maasai community.

In Laikipia, conservation-based businesses that benefit local residents are credited with much of the resurgence of wildlife in the only region in Kenya where wildlife populations are growing outside national parks. And conservation-based enterprises are also increasing in Tanzania, encouraged by the establishment of Wildlife Management Areas (see Module 4).

Key points to remember

1 Land-use planning at both the macro and micro levels can harmonize national and local goals. It can contribute to rural development, wealth creation, equity, food security and sustainability of resources.

2 Land use is changing dramatically in East Africa in an unplanned way, with often deleterious and unsustainable results. Increasingly rapid conversion of rangeland into farmland is leading to 1) the decline of pastoralism as a livelihood, despite its sustainability in semi-arid regions; and 2) a plunge in wildlife populations, despite their national economic importance. Urgent planning is needed to alter these trends and ease cohabitation of different land users.

3 In the current policy environment, agriculture is often the most lucrative land use in the short term. But in the semi-arid areas of East Africa, it is often unsustainable and ends up degrading soils to the point that neither farming nor grazing can continue.

4 Policies and actions that could help sustain pastoral communities as well as the wildlife they live with include:

- Changing policies so that communities can manage and benefit from their own resources, including wildlife.
- Permitting and encouraging communities to earn high returns and be paid directly from businesses on their land.
- Other means of payment for ecosystem services, such as easements and leasing for conservation.
- Education and support for improving rangeland.
- Recognition that pastoralists need extensive area to move – and pastoralism is often the most sustainable livelihood in semi-arid lands.
- Support for livestock corridors as well as wildlife corridors.

Some of these methods are covered in detail in Modules 3 and 4. For land-use planning at the local level see Module 2.

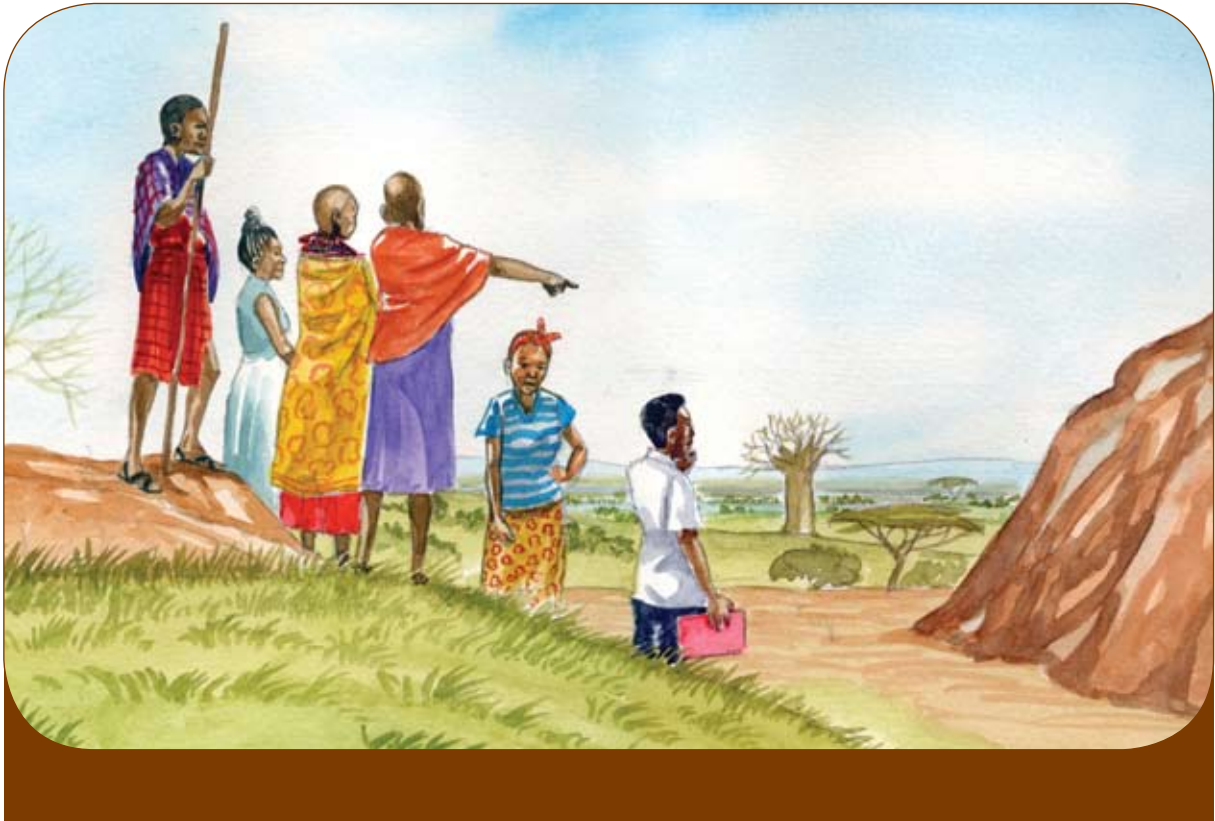
Key points to remember

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Mapping our community's future: why and how to practice participatory land-use planning



WHY PARTICIPATORY LAND-USE PLANNING?

We all see it: more people, more towns, more livestock, more farms More land degradation, deforestation, erosion More conflicts between farmers and pastoralists, miners and farmers, wildlife and people

Our demands on the land increase continually, but land area does not. How do we make the best and fairest use of the land we have, given local climate and natural resources, plus the traditions, livelihoods, hopes and dreams of communities?

Answering this question is the goal of land-use planning. And since land is fundamental to communities, it works best when the community is closely involved in the process. Hence the "participatory" in participatory land-use planning, or PLUP.

"We as humans do increase. But the land does not. So we have to do a better job of planning for the land so that it can continue to sustain us."

*Seraphino Bichabicha Mwanja,
District Game Officer,
Monduli District, Tanzania*

WHY THIS MODULE?

This module is designed to:

- Let you know what to expect during the process.

- Provide experience and advice from other communities as well as planning experts.
- Encourage you to discuss land-use issues even before formal planning begins, for maximum community involvement.

The module

- Focuses on parts of the process where community participation is most important.
- Should be used in conjunction with government guidelines, which detail the more technical and legal aspects of land-use planning. See Appendix 3, Table 2 for the official steps of land-use planning in Tanzania.

WHAT WILL PARTICIPATORY LAND-USE PLANNING DO FOR THE COMMUNITY?

PLUP is a process that involves everyone in the community, plus experts from outside and takes quite a number of meetings over perhaps a year or more. But it brings many benefits, both immediate and long-term.

PLUP helps communities:

- resolve ongoing conflicts over land use and prevent such conflicts in the future.
- bring residents together to envision a better future and start creating it.

- obtain secure tenure and certificates of title over traditional community lands.
- maximize the benefit from each area of land, depending on its characteristics.
- use land, water, wildlife and other natural resources in a way that is fair, transparent, sustainable over time and profitable.
- develop community-owned businesses based on wildlife and other natural resources.

In addition, land-use planning is required by Tanzanian law if a community wishes to:

- create and manage community Wildlife Management Areas or community forests.

“Village land-use planning is the process of evaluating and proposing alternative uses of natural resources in order to improve the living conditions of villagers.”

*United Republic of Tanzania,
Guidelines for Participatory Village Land Use
Management in Tanzania, 1998*

DOES IT WORK? THE VIEW FROM A VILLAGE

Loiborsiret Simanjiro district, is one of a half dozen Villages in northern Tanzania to perform participatory land-use planning (PLUP) in the last few years. By the time the PLUP process started, disputes were erupting:

- between pastoralists over shrinking pasture and water sources;
- between farmers and herders over where to plant and where to herd;
- between those with a stake in conservation and those who saw their livestock taken by lions;
- between those managing photographic safaris and those leading hunting safaris;
- between people born in the village and newcomers from other areas; and
- between the village and neighboring villages as well as a national park, over boundaries.

Over two years, village members worked hard with a team of officials, planners, scientists, Conflict mediators and NGO facilitators.

Representatives of the village plus the technical experts made up the Participatory Land-Use Management (PLUM) team, which led the process.

The PLUM team with other community members:

- resolved long-standing conflicts, sometimes by mediating between parties;
- clarified village boundaries so the process could move forward;
- organized for villagers to receive land titles – starting with widows, among the community's most vulnerable;
- helped the village agree on land-use zones for farming, year-round herding, dry-season herding, settlement, business and a Wildlife Management Area, which in turn will have its own zones; and

- created by-laws and agreed on ways to enforce them, including fines or other sanctions for violating zoning agreements.

Not everyone got everything s/he wanted. But participants speak about a renewed sense of security, fairness and hopefulness about the future. They say these come partly from the outcome and partly from the process of solving problems collaboratively in the community.

Here are some comments from those involved about participatory planning and its follow-up, participatory land-use management.

“We are benefiting from the new land-use plans because they have reduced land related conflicts. Also, because of the training, people are now aware of land laws. Even schoolchildren are now taught the land laws.”

Village Chairperson

“What impresses me much in the process of land-use planning is the act of allotting pieces of land for customary rights of occupancy – starting with parcels owned by widows, since they’re the most vulnerable.”

A villager

“It is no longer possible for people to grab or misuse land as all land in the village is allocated into different uses. If someone wants a piece of land, the whole village will know. They must follow proper procedures for the request to be granted.”

A young village man

WHO IS INVOLVED IN PARTICIPATORY LAND-USE PLANNING?

Village authorities. District authorities. Members of the country's planning ministry or national planning commission. Possibly NGO facilitators.

And most importantly: community members, whether "villagers," "group ranch members" or "local residents". In this module, "villagers" will be used primarily but refers to all residents.

Involvement is valued not just from those with power or education, or wealth, or just men or just elders. But people representing every segment of society: older women, younger women, older men, younger men, wealthy, farmers, herders ... (see Table 1).

Guiding the process will be a Participatory Land-Use

Management (PLUM) team. The PLUM team includes village leaders and representatives of various groups of villagers, as well as possibly specialists in soils, vegetation and other natural resources; professional planners; government officials; and other experts as needed.

During the process, villagers will form a Village Land-Use Management Committee (VLUM) to help implement and sustain the land-use management the community decides on. Village technicians will be hired and trained in land-use management techniques.

NGOs and donors may provide PLUM and VLUM members, village technicians and others with extensive training in land-use issues, laws, facilitation and various types of land-use management and improvement. They can also help arrange outside expertise as required to help the community achieve its goals.

TABLE 1. LEGAL MANDATES OF LUP ACTIVITIES AND MANDATES AT DIFFERENT LEVELS

Level	Mandate	Activities
District level: (District Councils)	<ul style="list-style-type: none"> Empowered to establish a District Land Administration Committee which will assist in managing land. Initiate, guide and advise Village Councils in the process of village land use planning. 	<ul style="list-style-type: none"> Supervise all land use issues and activities in the District as empowered by the DC e.g. allocate plot for residential, commercial and community services. Allocate farmers fields of not more than 100 acres. Form District PLUM team and PRA team to work in the villages.
Village level	<p>a) The PLUM team</p> <p>b) The Village Assembly is the main decision-making institution at the village level</p> <p>c) Village Councils have the responsibility to manage all land within their jurisdiction (executive powers).</p> <ul style="list-style-type: none"> Empowered to establish VLUM Committee to assist in LUP Empowered to prepare village-level by-laws <p>d) VLUM committee</p> <p>e) Hamlet Leaders</p> <p>f) Clan elders and Village Leaders</p> <p>g) Village Technicians</p> <p>h) Other relevant actors (NGOs, CBOs, Donors, etc.)</p>	<ul style="list-style-type: none"> Initiates and guides the process of participatory planning and implementation in the village. Approval of all agreed matters in the village. To issue certificates of customary rights of occupancy. Maintain a village land register. Works together with PLUM team. Help VCs to organize meetings, mobilize villagers, identifying and solving land conflicts, prepare village LUP and by-laws etc. Organize meetings in sub-villages and communicate with and forward ideas and suggestions to VLUM and VCs. Play an important role in conflict mediation, resolving land disputes regarding boundaries, ownership and user rights. Receive on-job-training to assist their fellow villagers in applying proposed LUP in the absence of PLUM team. Support the villages on social services, gender, environment training, awareness creation, credit schemes, LUP, etc.

WHAT ARE THE BASIC, GUIDING PRINCIPLES OF LAND-USE PLANNING?

- **Efficiency.** Use each bit of land in the best possible way. For instance, you may want to farm. But in a dry area, land may simply not yield much. Your returns from other activities, such as livestock or wildlife tourism, may be greater. In other places where there is much rain, agriculture may have the advantage.
- **Sustainability.** Related to efficiency, sustainability means that the land should be productive over the generations. E.g. Farming is not sustainable if the soil is the type that wears out after a year or two of cropping. It may provide short-term benefits, but cannot continue and can even ruin that land for other purposes.
- **Equity.** Consider all viewpoints and needs. Planning should work to the advantage of all: poor, well-off, women, men, children, elders, youth, newcomers, female-headed households
- **Improved local decision-making.** Done well, participatory land-use planning helps resolve conflicts and strengthens community decision-making. This outcome contrasts with "old-school" planning, performed by experts from outside and imposed on the community – and often therefore ignored.

SO HOW DO YOU BEGIN?

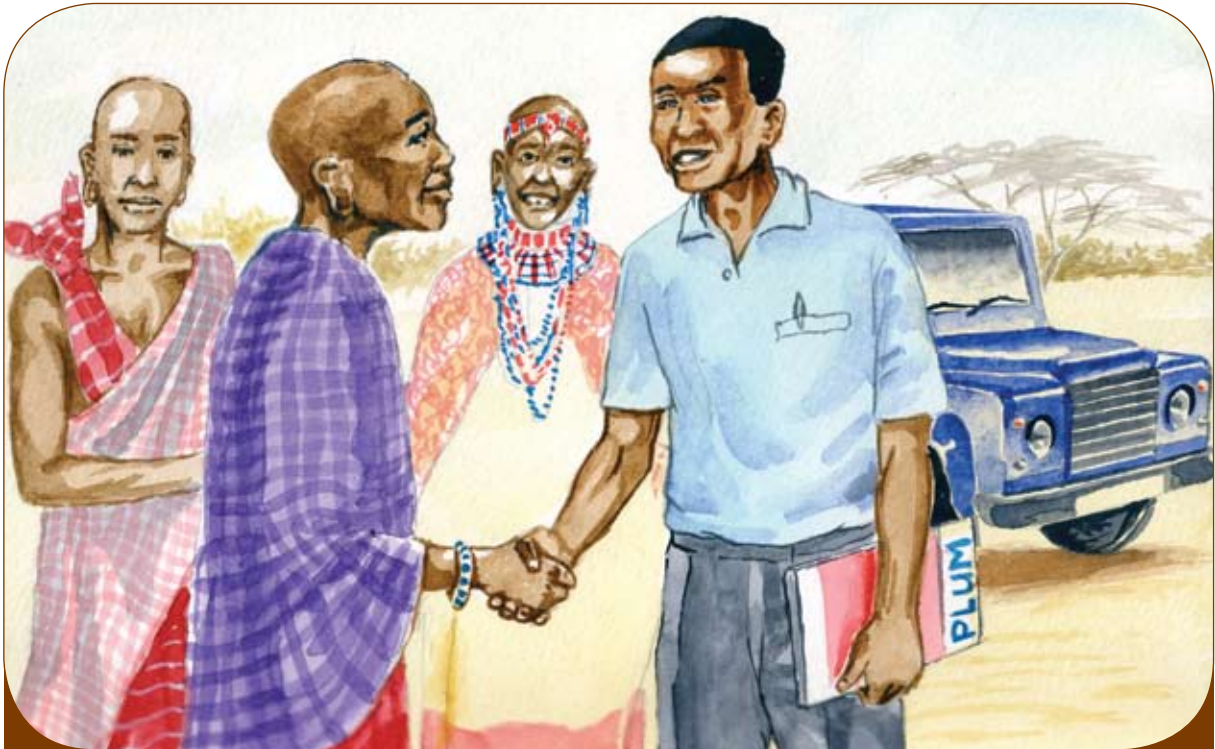
What follow are a number of phases and activities common in participatory planning. You might use some or all. You might use them in a different order. You may do them using more or less technology (for instance, sketching a natural-resources map versus creating one with sophisticated computer technology).

However they are done, these tasks help communities:

- Identify their own natural-resource and related problems
- Analyze how they developed and how they might be solved
- Select the best options for solving them based on the PLUP principles given above
- Implement solutions, getting needed technical information from both within and outside the community
- Move from planning and immediate problem-solving, to long-term land management.

PLANNING EARLY MEANS HAVING MORE OPTIONS

The sooner you do this, the more options you will have. If you plan ahead you might have ten different options for the community. You'll have much more flexibility, less stress and less conflict. Planning late means having fewer options. There will be facts on the ground, some of which you might not want, but they are already there. The longer you wait, the more possibly conflicting interests there will be.



Village elder welcomes member of PLUM team

PHASE 1: SETTING UP AND MAPPING¹

Form and train the PLUM and VLUM team

Assemble the PLUM team first, with representatives from all interests. They will be liaisons to village and district leadership and also to experts who can help. The PLUM will start meeting with community members to find out their concerns. In addition they will be forming other committees, such as the Participatory Rural Appraisal (PRA) committee and the Village Land-Use Management team.

The PLUM and VLUM teams with District officials will receive training in the Land Act of 1999, participatory planning, mapping, land-use management and conflict management. They may go for study tours to learn from other communities' successes and challenges, so they can bring back stories of other's experiences – both happy and not.

¹ The Phases mentioned in this section include the Village-Level Planning Steps outlined by the Tanzania National Land Use Planning Commission (TNLUPC). See <http://www.nlupc.co/tz/aboutus.php>. However, they are phrased and numbered differently in some cases to accommodate this section's greater detail on community-level research and visioning and to emphasize the community's contribution to the process.

Phase One here covers much of TNLUPC's Steps 1: Preparations and training; 2: PRAs; and 3: Supplementary Surveys.

FROM ONE VILLAGE TO ANOTHER: LESSONS FROM A STUDY TRIP

The PLUM and VLUM teams from Loiborsiret village visited Mbomipa village which had successfully completed land-use planning. Some important advice gathered:

1. Mbomipa includes a hunting concession, or "block." Hunting revenues – which can greatly exceed those from photo safaris – go directly to the central Tanzanian government, although a proportion are sent back to the Districts. But Mbomipa had figured out that one of the major advantages of creating a WMA is that villages could charge hunting companies directly. They managed to do so and also persuaded the hunting company to support village development projects: a road of 121 kms from Iringa town to the village. This would likely not have been possible without the WMA regulations.
2. The "wildlife market." Villagers may legally hunt game on their land through the "resident hunting" programme. They can then sell wildlife meat and skin in an open market. Mbomipa has used proceeds from resident hunting to construct primary and secondary schools.

Steps for success

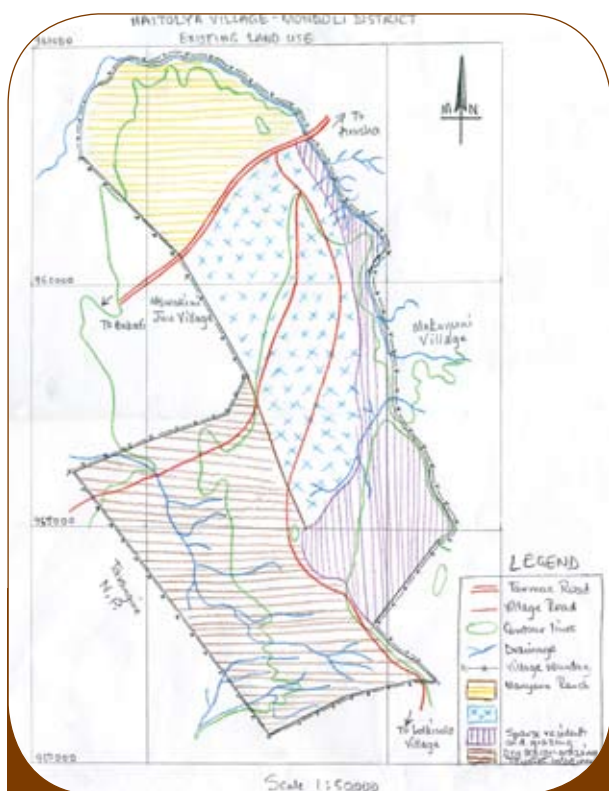
What's most important is that the PLUM and VLUM teams and residents form a "learning community": a group dedicated to finding out what is happening, what the community wants to see happen and how to get there. You will be using various tools, engaging the views of all segments of the community, solving problems and planning for a better future.

Village mapping exercises: What do you see on the ground now?

Maps, even informal ones, make it easier to think and talk about land use.

Walk around with village members, or at least stand under a tree somewhere and have people point out features they see. What's happening on the land and what is in the process of changing?

The PLUM team might encourage community members to draw "sketch maps" of what you see. Informal but useful, they can be made from lines and stones in the dirt. They can be drawn in markers on large pieces of paper. After they've been discussed and refined, they can be painted or stitched on fabric (these stay intact and can be unrolled for frequent use.) Later, the maps will be refined by specialists. But community sketch maps are still extremely useful during planning.



Example of a sketch map of Naitolya Village – Monduli District

Men and women might make maps separately, since they use different resources.

Community maps might include:

Natural resources

- Village boundaries
- Rivers, lakes and other water sources
- Wetlands
- Pasture
- Dry-season grazing areas
- All-year grazing areas
- Crops planted
- Drier areas
- Wetter areas
- Forests and their uses
- Places with medicinal plants
- Sacred or culturally special places
- Places that are fenced
- Where wildlife congregate

Infrastructure

- Settlements
- Shops
- Markets
- Roads
- Schools
- Churches
- Clinics or other facilities
- NGOs or other institutions

Conflicts

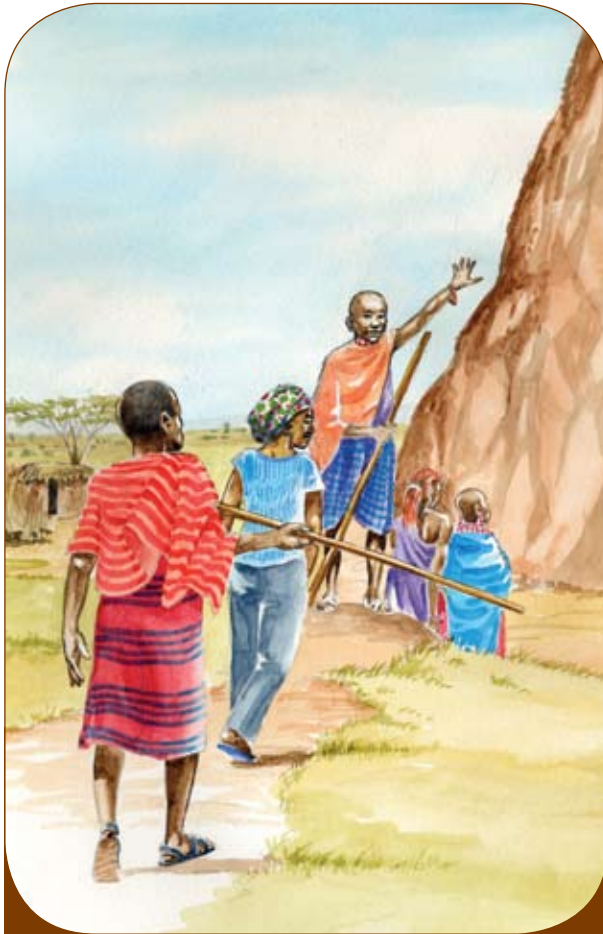
- Places and resources in dispute. Can be marked with a red "x".

Movements: (this could be shown on the same or another map)

- Places where outsiders come
- Places where villagers go outside their boundaries for natural resources (e.g. dry-season pasture, or water). Mark with arrows the direction people go if they're off the map.
- Where people take cattle in different seasons
- Where wild animals migrate e.g. calving grounds

Transect walks. Taking a closer look at the landscape.

In a transect walk, villagers record everything they see as they move through the terrain in a straight line, parallel to other transects. They might record particular details, such as the location of particularly useful trees,



Community members gather information during a transect walk

or medicinal plants. They might also add economic and other opportunities they see, plus obstacles to be overcome to make use of those opportunities (see Table 2).

Mapping and planning as tools toward equity

As you discuss the maps, consider who does what and who needs what. In the interest of equity, discuss different people's workloads and how the condition of natural resources affects these (and conversely who has the time to manage natural resources better).

- Which resources are plentiful or growing more so? Why?
- What effect does this have on men, on women, on villagers and newcomers?
- Which are scarce or growing scarcer? Why?
- What effect does this have on various groups?
- How long does it take now to collect water, as opposed to in past time?
- How long does it take to collect fuelwood?
- Where do livestock graze during each season?
- Do men travel for herding? How far and when? How does it compare with the past?
- Do people regularly use resources (i.e. pasture, water sources) in neighbouring villages? Do people from neighbouring villages regularly use resources in this village? If so, consider joint planning with the other village(s).

TABLE 2. DATA COLLECTED DURING TRANSECT WALKS THROUGH FOUR AREAS OF LOIBORSIRET

	Sub-village 1	Sub-village 2	Sub-village 3	Sub-village 4
Vegetation	<ul style="list-style-type: none"> • Natural trees • Short grasses 	<ul style="list-style-type: none"> • Natural trees • Short grasses 	<ul style="list-style-type: none"> • Trees and short grasses 	<ul style="list-style-type: none"> • Short trees and grasses
Economic Services	<ul style="list-style-type: none"> • Cultivation • Livestock 	<ul style="list-style-type: none"> • Cultivation (maize, beans) • Livestock 	<ul style="list-style-type: none"> • Cultivation (Maize) • Livestock 	<ul style="list-style-type: none"> • Mining • Agriculture • Livestock
Residential	<ul style="list-style-type: none"> • Very scattered 	<ul style="list-style-type: none"> • Very scattered 	<ul style="list-style-type: none"> • Very scattered 	<ul style="list-style-type: none"> • Congested
Social Services	<ul style="list-style-type: none"> • Road • Water dam 	<ul style="list-style-type: none"> • Road • Water dam 	<ul style="list-style-type: none"> • 2 maize mill Machines • Road, market place, water dam 	<ul style="list-style-type: none"> • Church, school, mosque, maize mill, shops, water well and road
Opportunities	<ul style="list-style-type: none"> • Water dam • Potential area for agriculture • Wildlife 	<ul style="list-style-type: none"> • Cattle dip, building poles • Market place, water dam • Potential area for agriculture • Wildlife 	<ul style="list-style-type: none"> • Water dam • Wildlife population 	<ul style="list-style-type: none"> • Gemstones/mining

Steps for success

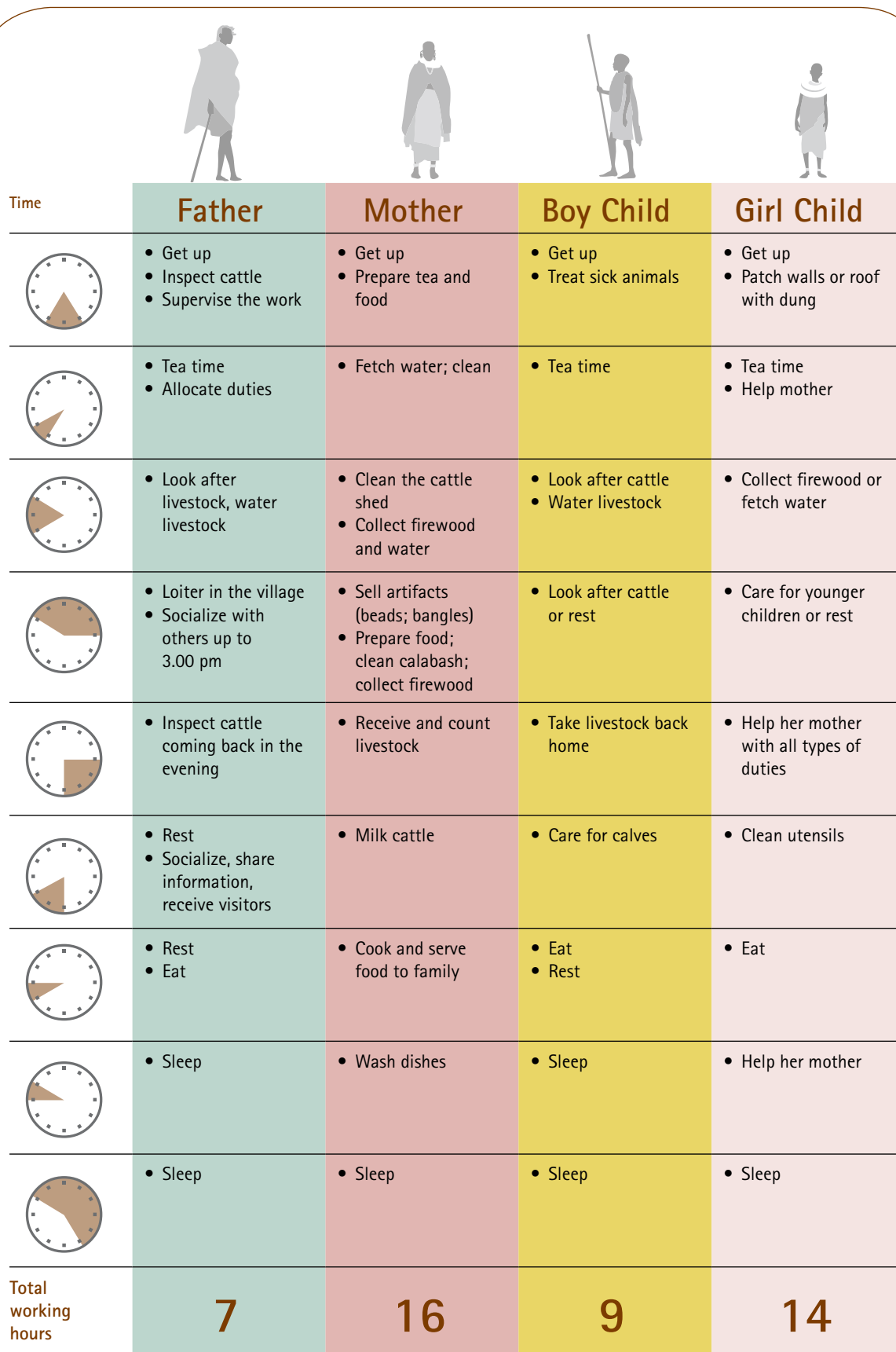


FIGURE 1. DAILY CALENDAR SHOWING RESOURCE USE AND WORK BY GENDER

"Mapping" the day

Another popular method is the "24-hour day" exercise (Figure 1). With a group of women and a group of men, go through the hours of the day and what each group is generally doing each hour. You might do a dry-season "day" and a rainy season "day."

Daily calendars can be used to:

- Generate discussion about gender issues by comparing schedules of women and men; boys and girls and how these differences affect work, health, education and other issues.
- Assess the timing of activities.
- Discuss new activities and their implications for time use of various groups.
- Figure out ways to make workloads and management of natural resources more equitable.

REMEMBER... ASK OLDER MEMBERS WHAT IT LOOKED LIKE BEFORE

- When were the best times? What made them good?
- When were the worst times? What made them hard?
- Were these periods good or bad, for everyone?
- Who profited, who suffered?
- What has improved over the years?
- What has gotten worse?
- What would different groups like to see retained or regained – or left behind?

Timelines. For another perspective of natural-resource issues over time, create a timeline of significant events. The partial timeline below shows specifically conflicts over water, but other events can be shown too and their connection to natural-resource management explained.

- How were these events influenced by natural resources and how did they influence natural-resource management?
- How well did the actions taken by the community solve the problems?
- Might there be better or other solutions?

Part of a village timeline

EVENT	CONSEQUENCE	SOLUTION
Drought	Food shortage and high mortality of livestock	Planted maize with short growing periods
Conflict between Maasai and Barbaig tribes	Death of nine people during tribal conflicts over water in Emboreet village	Barbaig people evicted from village
Drought	Water shortage	Three water wells dug
Drought	Food shortage, high mortality of animals and land encroachment	Water wells dug
		Increased sale of livestock

PHASE TWO: IMAGINING POSSIBLE FUTURES AND EXPLORING OPTIONS²

Ready or not, change is coming

Change is inevitable. It's coming and we can't stop it.

But we can manage how it affects our life so it doesn't disrupt the social fabric or degrade our resources.

If you manage it, you're likely to have fewer conflicts.

If you DON'T manage change, it may destroy the very basis on which your livelihood rests. If you don't plan, brace yourself for lots of conflicts and lots of surprises – most of them unpleasant.

*David Nkedianye
Rangelands and communities specialist,
Tanzania*

Project the current trends. If things keep going as they are ...

- If the changes brought up in mapping and discussions continue, what kind of conflicts are you likely to experience in five years?
- What kind of changes in occupation and workload for men? For women? For girls? For boys?
- What might your community look like in five years? Ten years? Twenty?
- Who would benefit?
- Who would suffer?
- Is this a picture that you would like to become reality?

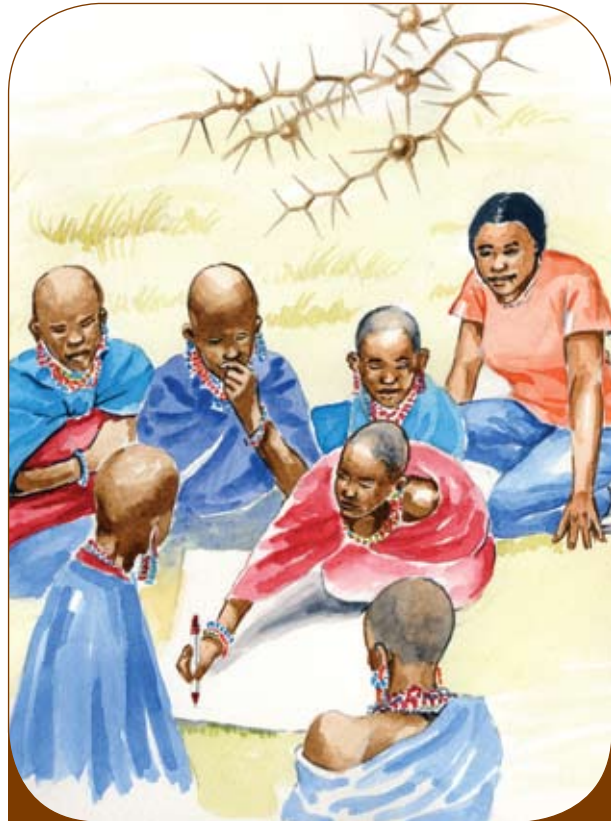
Dream ...

What would you love your community to look like in five years? Ten? Twenty?

Different groups might draw a "dream map" of their ideal future village. They might include livelihoods, infrastructure, access to water, trees and other natural resources, wildlife

Perhaps older members may want it to look more like the better years in the past. It's likely that educated youth may want something entirely new.

All dreams are valid. Encourage each other to share them. They will not all be realized, but understanding them will surface useful information as you plan.



Maasai women working on a sketch map with a facilitator

Only discuss how realistic they may be after people have a chance to dream.

Consider your options. Communities often have more opportunities than they realize.

Now is the time to explore what options you have to improve livelihoods, in a way that regenerates the land.

- If the community values livestock, perhaps you would like to investigate improved breeds and feedlots, to fatten cattle faster and sell them at higher prices. This requires less land than traditional pastoralism and can relieve pressure on pastureland.
- Is food security a major issue? Then you might investigate agroforestry – a system that is productive even in drylands. By carefully selecting tree species, you can grow vegetables as well as trees for food, fuel, building and even fodder, in the same space.
- Is water security a priority? You might consider rainwater harvesting by building small dams that collect rainfall water.
- Do you have a lot of wildlife? Then perhaps an eco-tourism business is an option.

² Phase Two relates to NLUPC's Step 4: Participatory village land-use planning and administration.

- What are other opportunities that the community would like to pursue?
- Which are priorities?
- What obstacles may need to be overcome for priority options to become reality?

For instance, for improved livestock, you may need breeder bulls. You may need outside expertise to put in a feedlot. You may need training in growing fodder trees.

To improve farming output, you may need better seeds, help in learning how to regenerate the soil, an irrigation system

“In a given village, we may need all these things – tourism areas, dry-season and emergency grazing areas, agriculture. But usually the good land goes to agriculture first, then livestock are relegated to marginal lands, where there is less moisture, less grass, more disease in the bush.

For one thing, people need better information about farming. Why should you use 100 acres for a farm when you can't manage them properly? Why not just use five and use them efficiently? Government extension officers could help a lot with this.”

Moses Nesele
Veterinarian and Community Planner

PHASE THREE: ADDRESSING THE URGENT³

Create a Community Action Plan (CAP)

What major natural-resource issues demand priority attention?

Degraded pasture? Wildlife conflicts? Water shortage? Boundary disputes?

While you're mobilizing for long-term land-use planning, quickly addressing some village priorities can create needed improvements and also give the community confidence and momentum in the planning process (see Table 3).

Your priorities for action might include income-generating activities; improving livestock health; redressing inequities in time or land or other resources; improving school facilities; reducing conflicts Many communities see an urgent need to plant trees to help

TABLE 3. HOW ONE VILLAGE RANKED ITS TOP PRIORITIES FOR INCLUSION IN THE COMMUNITY ACTION PLAN

Strategic objective	Rank
Increase household agricultural plot size from 1 to 4 acres	1
Increase milk production from ½ to 6 litres per cow	2
Increase maize production from 6 bags per acre to 10 bags	3
Increase bean production from 3 bags per acre to 6 bags	4
Increase animal live weight from 125 kgs to 200 kgs	5
Increase food intake from the current 2 meals to 3 a day	6
Increase honey production from 243 beehives to 400	7

the soil retain moisture, prevent erosion and protect water sources. Others wish to improve pastureland by planting improved forage plants or “fertilizer” trees that draw nitrogen into the earth.

Here are some steps in creating a Community Action Plan to address urgent challenges.

- List areas for attention.
- Rank them as to priority.
- Put together a workplan with proposed actions.
- Decide who does what.
- Agree on a time frame.
- Highlight areas where the community may need external assistance.

For instance, in Loiborsiret, boundary conflicts with a neighboring village as well as a national park needed to be solved before the land-use planning process could continue. A village boundary negotiation team was formed and managed to solve the conflict with the neighboring village after several rounds of negotiation.

The dispute with the park required mediation and an outside arbitrator. But there was a major payoff: the village regained land and boundary maps were re-drawn (see Module 5 on Conflict Management).

Loiborsiret also saw gender inequality as a major problem that interfered with natural resource management as well as other aspects of village life: women were working 16 hours a day and had no time to implement any new activities. Table 1 (Appendix 3) shows a summary of how the village planned to address gender inequality, as well as a couple of other priorities.

³ Community Action Plan is mentioned in NLUPC's Step 2.

PHASE FOUR: GETTING MORE INFORMATION AND FINISHING THE PLAN⁴

Get expert assistance

While you are implementing the priorities in the Community Action Plan, longer term planning continues. And you will need some help from experts.

- The village will need to mark its boundaries. But how do you know exactly where the beacons should go?
- Perhaps people need more trees for fuel, building, fodder, shade What's the best type to plant in the area and where you want them?
- Perhaps someone wants to put in a flower farm with irrigation. What would that do to the local water supply, in terms of quantity and also possible pollution?

It's time for outsiders to help. Professional NGO, government, or consulting experts will do scientific surveys to supplement the sketch maps and transect walks the community has created.

For instance, surveyors will ensure that the boundary markers are in the right place. Soil and other scientists will analyze soil types and determine rainfall and weather trends to see if farming is a good option. Wildlife specialists may help the community count the number of animals and map their movements, to help decrease wildlife/human conflicts now and in the future. Social scientists may do a socio-economic survey of households and interview community members. Cartographers will create an official map including boundaries, physical features, natural resources and current land uses.

“What we're trying to do is double or triple the harvest from a given piece of land. That way we can reduce the size of land but increase the harvest. In Emboreet we've been using best practices: the right seeds, which are drought resistant; planting early, way before the long rains. The village office is selling improved seed for maize, cow peas, green grams at a subsidized price. At first, no one was rushing for the seeds, but now, in the third year, people are. They're tougher and give you more for the amount of land you have. That also leaves more land for livestock and other uses.”

Moses Nesele
Veterinarian and Community Planner

Create the actual land-use plan

By now, everyone will have learned a lot about the land, opportunities and obstacles and community priorities. You're ready to create a land-use plan.

The plan will include a map showing zones for such uses as:

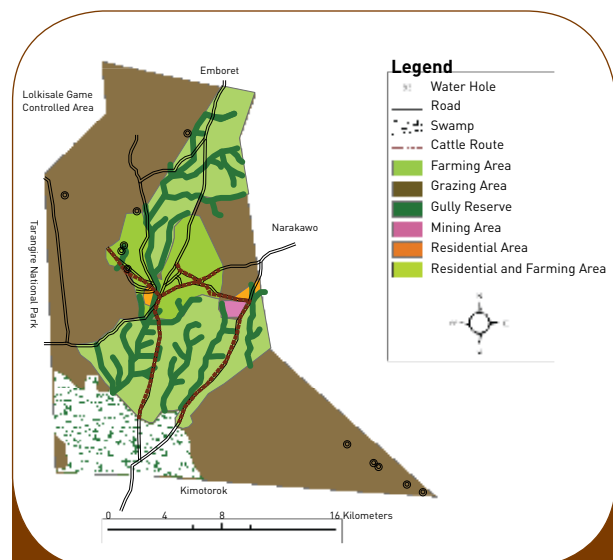
- Livestock grazing during the wet season
- A feedlot or other infrastructure for livestock
- Livestock grazing during dry season
- Grazing areas that are also used by wildlife
- Farming
- New settlements
- Fuelwood gathering
- Tree planting
- Institutional development
- A community forest or Wildlife Management Area.

The plan will also narrate how the community has agreed to manage the land, improving pasture and farmland. For instance, reversing erosion, minimizing human-wildlife conflicts, developing water sources It may include types of businesses the community wishes to develop, and

PLANNING IS DIFFICULT BUT EMPOWERING

When people talk together about their past, present and future, it's empowering. If people agree on one or two directions they want to go in, it's good. They feel good.

David Nkedianye



Loiborsiret Village proposed land use plan 2004

⁴ These Phase relates to NLUPC's Step 4: Participatory village land-use planning and administration.

PHASE FIVE: LEGALITIES⁵

Register the plan

Your land-use plan is a legal, binding document. The PLUM will make sure it is in the form required by government and gets registered with the appropriate authorities.

Agree on by-laws

By-laws are a key tool of participatory land-use management. They provide the legal basis for enforcement of land-use agreements. After village consensus, they will need to be approved by government offices to make sure they do not conflict with the interests of other villages.

By-laws specify, for instance, where livestock may graze and when and where people may build houses or plant crops (as agreed in the land-use plan). Since they are legally binding, by-laws also specify penalties for cases where they are disobeyed.

Get land titles and certificates

One of the advantages of the planning process is that it helps an individual, family or group obtain a certificate of customary rights to their land. Village Councils issue the certificates, with the help of the PLUM team.

In Loiborsiret, an assisting NGO helped demarcating individual pieces of land, starting with 15 parcels where widows lived, which was the village's top priority.

Set up a Village Land Registry

Everyone should be able to access the maps, plans and land titles. So the planning and management committees and village authorities will set up a Village Land Registry.

The Village Executive Officer will be in charge of:

- keeping records of all changes in land tenure and use;
- reporting changes to the District Council; and
- supplying information on land use and tenure in case of land disputes.

In Naitolya, the GEF funded project "Novel forms of livestock and wildlife integration adjacent to protected areas: Tanzania" supported the establishment of a land registry and supplied the village with equipment and supplies to establish the registry.

⁵ Registration and by-laws are mentioned in TNLUPC's Steps 4 and 6.

PHASE SIX: BEGIN IMPLEMENTING THE PLAN ... AND KEEP THE MOMENTUM GOING⁶

The PLUM and VLUM teams will work with extensionists and other authorities and experts to draft a work-plan to implement the land-use plan priorities.

Soon the PLUM will be phasing itself out. But first, it will help plan for sustaining the progress. This may include further assessments and detailed solutions for problems not yet addressed; Table 2 (Appendix 3) shows an example.

Recruit and train technicians

The PLUM team will also recruit and oversee on-the-job training for village technicians (VTs). Training may cover land laws and rights, environmental issues and management of conflict over resources.

From now, the technicians will become the local experts helping the village continue and scale up the various tasks of land-use management. With other members of the community, they will begin to implement the land-use plan.

Assess accomplishments and remaining needs

Some of the final PLUM team activities will be village meetings to:

- Evaluate land-use management achievements: How have they improved natural-resource use and production? What, if anything, has gone wrong? What is going right?
- Assess the capacity of villagers and local institutions to proceed.
- Decide who will be responsible for implementing the various land-use management strategies.
- Plan for further capacity building as needed.
- Possibly link villagers with further sources of expertise.

For instance, development partners in Simanjiro formed the Simanjiro District Land Forum to help stakeholders share ideas, manage the shared ecosystem and advocate for helpful land-use policy.

One of the issues the Land Forum addresses is human/wildlife conflict. According to AWF, from 2004-08, District residents killed 148 lions in retaliation for livestock loss. The Land Forum is working to help more

⁶ This phase corresponds to Step 5: Implementation and Step 6: Consolidation.

Steps for success

communities establish Wildlife Management Areas so that they can receive income from the presence of wildlife on their land, rather than just suffer damage (see Box 1).

Keep it going

As the PLUM team disbands, community land-use management efforts will now be led by the Village Land-Use Management team and the technicians, with of course support from villagers and authorities.

Regular meetings will help all community members review plans, appreciate improvements, address new challenges and generally keep up the positive practices learned and begun during the planning process.

The community has worked hard to get to this point. Be sure to emphasize – and celebrate – achievements!

BOX 1. DEFENDING THE FIELDS: HUMAN/WILDLIFE CONFLICT IN THE PROJECT AREA

To better understand the extent and dynamics of human-wildlife conflicts, the GEF project monitored such conflicts in three villages – Lolkisale, Naitolia and Loborsoit A – in 2006.

During that year, 25 percent of the total cultivated area surveyed was damaged by wildlife. Damage was higher in smaller, subsistence plots than on large farms.

The species that raided crops most frequently were elephants, zebra and warthog/wild pig. Much of the crop damage was caused by more than 3-4 species per incident.

In nine cases, elephants caused destruction of food stores, water supplies and human death.

Passive prevention methods such as vegetation fences, barbed wire fences, home made wire proved to be less effective in driving off wildlife than active methods, especially against large herbivores. In fact, fences are nearly useless against large herbivores, especially elephants.

The study found that a watchman, using active methods – fire, loud noise, smoke etc. – is more successful in protecting farm fields.

Source: Pittiglio, 2009



Key points to remember

1 Local land-use planning can:

- resolve and avoid conflict;
- draw attention to, and ameliorate, inequities in land distribution between genders and between groups pursuing different livelihoods;
- help communities consider new or improved methods for livelihoods;
- locate chosen activities in the most appropriate land zone; and
- bring communities together as they envision their shared future.

2 Local land-use planning works best when highly participatory – involving all sectors of the community actively in observing trends, articulating visions, voicing concerns and making decisions. A number of participatory exercises can be useful in these efforts: from mapping to reminiscing; dreaming and visioning; to workshops and study tours.

3 Wide consultation can avoid inequitable decisions such as pushing livestock onto extreme lands and into areas infested with disease (see Module 6).

4 Community Action Plans can stimulate immediate action on top priorities, such as income generation or land degradation, while the community and experts stay involved in long-term planning.

5 Land-use planning allows people to consider new options for earning income and to seek outside help when needed (also see Module 3).

Key points to remember

APPENDIX 1 ACRONYMS

AA	Authorized Association
CAP	Community Action Plan
COB	Community Based Organization
CBLUP	Community Based Land Use Planning
DC	District Councils
DLAC	District Land Advisory Committee
GMP	General Management Plan
JAP	Joint Action Plan
NLUPC	National Land Use Planning Commission
O&OD	Opportunities and Obstacles to Development
PLUM	Participatory Land-Use Management
PORI	Partnership Options for Resource Use Innovations
PRA	Participatory Rural Appraisal/Participatory Resource Assessment
RMZP	Resource Management Zoning Plan
SWOT	Strength, Weaknesses, Opportunities and Threats
URT	United Republic of Tanzania
VA	Village Assembly
VAC	Village Adjudication Committee
VLUM	Village Land Use Management committee
VLUP	Village Land Use Plans
VEO	Village Executive Officer
VCs	Village Councils
VTs	Village Technicians
WDC	Ward Development Committee

APPENDIX 2 GLOSSARY

Beacon. A mark on ground indicating a point of common interests, like a boundary between two parcels of land or between two villages. Surveyors use concrete structures or iron pins to indicate boundaries (NLUPC, 1998).

By-laws. Village level by-laws can be made by the Village Council for the purpose of bringing into effect some of its functions as conferred by the Local Government Act, no. 7 of 1982 (sections 164-167) (NLUPC, 1998).

Certificate of Customary Land Rights. A document which specifies rights to land conferred to a land occupier and user following tribal customs and traditions on land. The Village Land Act (1999) confers custodian powers to Village Councils and Village Assemblies in registered villages (NLUPC, 1998).

Community Action Plan (CAP). A CAP indicates the flow of activities and use of resources as scheduled by a community pursuing certain goals. In general, an action plan includes objectives, strategies and activities to achieve objectives, required input, who will provide the input, time frame which objectives should be realized, indicators for monitoring and evaluation (NLUPC, 1998).

Joint Area planning committee. Is an institution comprised of councillors from villages whose interest is to make a joint land use agreement for their planning area. This can be the whole area covered by the respective villages or an area which is of common interest to the villages making up the committee (NLUPC, 1998).

Joint land use agreement. In situations where a given land resource, like grazing area, wood land, water catchment, etc. is located within boundaries of high importance for more than one village, the respective villages may decide to come together and jointly prepare a plan for the management of the common resource. Such common agreement is then referred to as joint land use agreement (NLUPC, 1998).

Land registration. It involves the entering into a land register, a memorial recording of rights held by individuals, groups of people, companies etc. In most cases

the purpose of registering land in villages is to enhance security and to reduce boundary conflicts (NLUPC, 1998).

Stakeholders. Individuals and groups of individuals having an interest (holding a stake) in a specific issue, i.e. development process. Within the PLUM context stakeholders include all who have an interest in the land resources located within the village boundaries (NLUPC, 1998).

Village. A village registered as such under the Local Government Act, no. 7 of 1982 (NLUPC, 1998).

Village Assembly. Include every person who is ordinarily resident in the village and who has attained apparent age of eighteen years. The village chairperson is the chairperson of the Village Assembly and the Village Executive Officer is the secretary. The Assembly is the supreme authority of all matters of general policy-making in the village and it is responsible for the election of the Village Council (NLUPC, 1998).

Village Council. Is the village government organ in which all executive power is vested in respect to all affairs and business of a village. It is made up of councillors elected from among the members of the Village Assembly and by the Village Assembly. Its 25 councillors form three standing committees: finance and planning; security; and social and economic services, plus a number of sub-committees (NLUPC, 1998).

Village land. Includes all land inside the boundaries of registered villages, where the Village Councils and Village Assemblies are given power to manage (WWG, 2004). Village land means the land declared to be village land under and in accordance with section 7 of the Village Land Act 1999 and includes any land transferred to a village.

Village land-use plan. Village land-use plan is an overall plan showing how village resources should be used to meet declared objectives. In PLUM, a village land use plan is prepared through the full involvement of the various stakeholders and their institutions, so that it reflects their interest and capacities in a balanced manner. A village land use plan facilitates development efforts dealing with natural resource use, such as agriculture, livestock, settlement, water, forestry, wildlife and community development (NLUPC, 1998).

APPENDIX 3 RELEVANT INFORMATION

TABLE 1. PART OF LOIBORSIRET'S PROPOSED COMMUNITY ACTION PLAN (CAP)

Strategic objectives	Opportunity	Obstacles	Strategic actions	Resources needed	Indicative Cost (TZS)	Indicators
1. To reduce women's working hours from the current 16 to 8 by 2008	<ul style="list-style-type: none"> • Draught animals • Improved stoves 	<ul style="list-style-type: none"> • Misuse of draught animals • Lack of new stoves 	<ul style="list-style-type: none"> • Plans preparation • Training on simple, affordable cooking stoves • Community to use simple technology 	<ul style="list-style-type: none"> • Stationery • Trainer • Training materials • Allowances • Transport 	36,000	Number of hours
2. To increase the number of resources owned by a women from 2 upto 5 by 2008	<ul style="list-style-type: none"> • Women's policy 	<ul style="list-style-type: none"> • Women's policy not used as intended 	<ul style="list-style-type: none"> • Village meetings on the use of such a policy • Training groups and Village Council on the policy • Implementation of the policy 	<ul style="list-style-type: none"> • Stationery • Trainer • Training-materials • Allowances • Transport • Policy document 	36,000	Number of resources owned
3. To address land conflicts in the village	<ul style="list-style-type: none"> • LUPs in the villages • VLCs structures for land conflicts • District land experts • Presence of PLUM and VLUM teams 	<ul style="list-style-type: none"> • Village land by-laws not finalized and approved • Village land conflicts with Narakuwo village and Tarangire National Park • Individual land conflicts 	<ul style="list-style-type: none"> • Finalise and use of land by-laws • Train VLCs and VIs on LUP and land rights • Sensitize communities on the use of VLUPs 	<ul style="list-style-type: none"> • Land use plans • Human resources 		<ul style="list-style-type: none"> • Enforced uses of onagreed LUP • Number of land conflicts • Number of land conflicts addressed
4. To address and mitigate human-wildlife conflicts	<ul style="list-style-type: none"> • Abundance of wildlife • Existing laws and regulations 	<ul style="list-style-type: none"> • Human-wildlife conflicts (predation, disease transmission and crop raiding) 	<ul style="list-style-type: none"> • Establish Maasai cultural boma • Establish WMAs 	<ul style="list-style-type: none"> • Wildlife resources • Trainers on CBVs 		<ul style="list-style-type: none"> • Number of CBVs established • Shared benefits from wildlife business ventures

TABLE 2. OVERVIEW OF STEPS AND ACTIVITIES OF PLUM

Step	Results	Activity
1. Preparation (district level)	<ul style="list-style-type: none"> • Plum initiated at the district level and human resources mobilized 	<ul style="list-style-type: none"> • Formation of a land use planning team
	<ul style="list-style-type: none"> • A sound work plan and action plan • Concerned institutions mobilized • Sufficient knowledge for the planning exercise • A sound plan of operation • Approval from the concerned institutions • Funds, materials and human resources allocated 	<ul style="list-style-type: none"> • Preparation of action plan and mobilizing the concerned institutions • Collection and analysis of district data • Preparation of a plan of operation with priority villages
2. PRA for land use management	<ul style="list-style-type: none"> • District human resources allocated (PRA-team) • Village council mobilized • Village community mobilized • VLUM committee formed and briefed 	<ul style="list-style-type: none"> • Formation of a PRA team • Introduction village council meeting • Additional introductory visits • Village assembly meeting and formation VLUM committee • Briefing VLUM committee
	<ul style="list-style-type: none"> • Sufficient understanding about the village • A technical sound community action plan reflecting stakeholders' interests • Villages aware of PLUM and mobilized to implement it 	<ul style="list-style-type: none"> • Data gathering in village • Ranking of problems and opportunities • Creation of a community action plan for village land – use management
3. Supplementary surveys	<ul style="list-style-type: none"> • Village institutions mobilized • District human resources allocated 	<ul style="list-style-type: none"> • Meeting with the village council and VLUM committee • Preparation for the supplementary surveys
	<ul style="list-style-type: none"> • A certificate of village land which empowers the village council legally to deal with PLUM • Land conflicts with neighboring villages resolved • Village base map • Conditions fulfilled for land administration • Existing village land use map • Enough understanding for the preparation of a detailed village land-use management plan 	<ul style="list-style-type: none"> • Establishment of village boundaries • Establishment of village reference points • Preparation of a village boundary map • General land survey for preparation of a village base map • Assessment of existing land use • Additional agro-economic survey
4. Participatory land-use planning and administration	<ul style="list-style-type: none"> • A plan for minimizing land conflicts, optional land resource use and improving land security 	<ul style="list-style-type: none"> • Drafting of detailed village land-use plan
	<ul style="list-style-type: none"> • Land conflicts are minimized • Land security is improved • Women's control over land is improved • Allocation of land is optimized • A well documented village land-use plan, reflecting stakeholders' agreements • The village is empowered to settle land issues • Agreements concerning land ownership and land use management are enforced 	<ul style="list-style-type: none"> • Demarcation, mapping and registering public areas • Demarcation, mapping and registering of private land parcels • Finalizing detailed village land-use plan, natural resource management strategies and drawing of an agreed land use map • Establishment of a village land registry • Issuing certificates of customary rights • Creation of by-laws

TABLE 2. (CONT.)

Step	Results	Activity
5. Implementation of appropriate land management measures	• District and ward human resources are allocated	• Arrangements with concerned extensionists and other experts
	• Village institutions are mobilized for this step	• Meeting with village council and VLUM committee
	• Land management issues further analyzed and opportunities identified	• Supplementary land management appraisal
	• Villagers are mobilized	• Village assembly meeting
6. Consolidation	• A work-plan is prepared to apply improved land management measures	• Meetings at the sub-village level
	• Villagers plan implement and monitor the selected measures	• Planning and implementation of the identified measures
	• Village technicians recruited and trained	• Continuation, but with on the job training of village technicians
	• Enough understanding by the village institutions and the PLUM team to plan the consolidation process	• Assessment impact of PLUM process in the village and the capacity of villagers and their institutions to proceed
	• Roles of the stakeholders well defined and agreed upon to assure continuation of PLUM	• Agreeing and formalizing the roles of the stakeholders in PLUM
	• Good communication between village and district institutions	• Village assembly meeting
		• Low profile follow-up

Tanzanian national laws and policies relevant to land-use planning

Following are some of the many policy documents relating to land-use planning and management.

Guidelines for Participatory Village Land Use Management in Tanzania (1998)

Developed by the National Land Use Planning Commission of Tanzania, these guidelines introduce and institutionalize participatory land-use planning and management at the village level. Organized around six basic steps, the guidelines may be adapted to the local context.

The National Land Policy (1997)

This Policy aims to ensure secure land tenure, encourage optimal land use and to facilitate sustainable development. Specific objectives include:

- Promoting equitable access to land for all citizens;
- Ensuring that land rights – especially customary rights of small holders – are clarified and secured in law.

Land policy statements on planning and administration

a) **Village land-use planning.** The policy states that the village land-use planning process will be simplified for speedy execution. It should be based on the following criteria:

- Land-use planning will be done in a participatory manner to involve beneficiaries. Planning will be preceded by studies to determine existing land tenure, land use patterns and land capability;
- Local land-use plans are to be developed by the District Council in collaboration with Village Councils;
- Village land-use plans will be used as a tool for implementing policies for better land use and management; and
- Village land-use plans will provide a basis for guiding extension services for agriculture, livestock, forestry, wildlife, fisheries and environmental conservation.

b) **Overlapping land-use areas.** Wildlife management may overlap only with livestock keeping, not farming or other land uses.

c) **Institutional framework.** In order to reduce conflicts and malpractices in land administration, the land policy states that "the minister for lands shall be the sole authority responsible for land matters. Where delegation of authority is required there shall be a clear and hierarchical system of accountability."

The Land Act No. 4 and the Village Land Act No. 5, both of 1999.

Together, these two Acts cover managing and administering land, including settling land disputes.

According to the Village Land Act (1999) section 8 (1): "The Village Council shall, subject to the provisions of the Act, be responsible for the management of all

village land. The Village Council shall exercise the functions of management in accordance with the principles applicable to a trustee managing property on behalf of a beneficiary as if the council were a trustee of, and the villagers and other persons resident in the village were beneficiaries under a trust of the village land. The Village Council at every ordinary meeting of the Village Assembly, shall report to and take account of the views of the Village Assembly on the management and administration of the Village land. In the exercise of the powers of management, a village council shall have power to enter into an agreement with another village, to be known as a joint village land use agreement with any other village council concerning the use by any one or more groups. Land Act (1999) Sect.11 (l).

TABLE 3. CHECKLIST FOR DATA TO COLLECT FOR A VILLAGE LAND-USE PLAN

General information

- Location
- Elevation
- Accessibility (roads, distances)
- Relevant infrastructure
- Administrative division

Climate (annual, distribution and extremes)

- Rainfall
- Temperature
- Wind velocity
- Potential evapotranspiration
- Growing period

Soils

- Relief (slopes)
- Erosion
- Soil fertility
- Other soil related limitations

Hydrology

- Rivers and minor streams
- Drainage
- Groundwater level and quality

Land suitability

- Suitability for different land uses: crops, livestock grazing, forestry, etc.
- Land capability
- Carrying capacity

Actual land uses

- Agriculture: major crops
- Livestock
- Forestry
- Natural vegetation
- Other uses

Sociology / social services

- Demography: number of people per village and the age and sex composition
- Land pressure
- Presence of major conflicts (in particular to land use)
- Inter-and intra – regional migrations
- Settlement pattern
- Housing
- Status of and services for education and health (schools and dispensaries)
- Other (social) services: shops, go downs, water supply milling machines, etc
- Presence and effectiveness of local institutions: governmental organizations, civil and religious NGOs/CBOs
- Effectiveness of village leadership and dispensaries)

Land management related policies and laws

- Laws, policies, regulations, etc. concerning land, water, livestock forestry, wildlife, settlements, tourism, etc
- By-laws for land management

Projects active in the area

- Sectoral projects
- Integrated projects

Existing land-use and development plans

- District, division
- Village
- National, zonal, regional

Economy

- Living standard
- Sources of income
- Expenditure pattern
- Agricultural and livestock production
- Farming systems
- Availability of (agricultural) inputs
- Labour availability
- Markets
- Farm size
- Land security and tenure systems

The Wildlife Policy of Tanzania (1998)

Government policy for the wildlife sector aims to involve more stakeholders in wildlife conservation – particularly rural communities, the private sector and international partners. This Policy provides for local communities to establish and oversee Wildlife Man-

agement Areas (WMAs) in wildlife corridors, migration routes and buffer zones. Establishing WMAs allows villages to manage, use and benefit from the wildlife on their land. Communities may establish WMAs through their village land-use plans.

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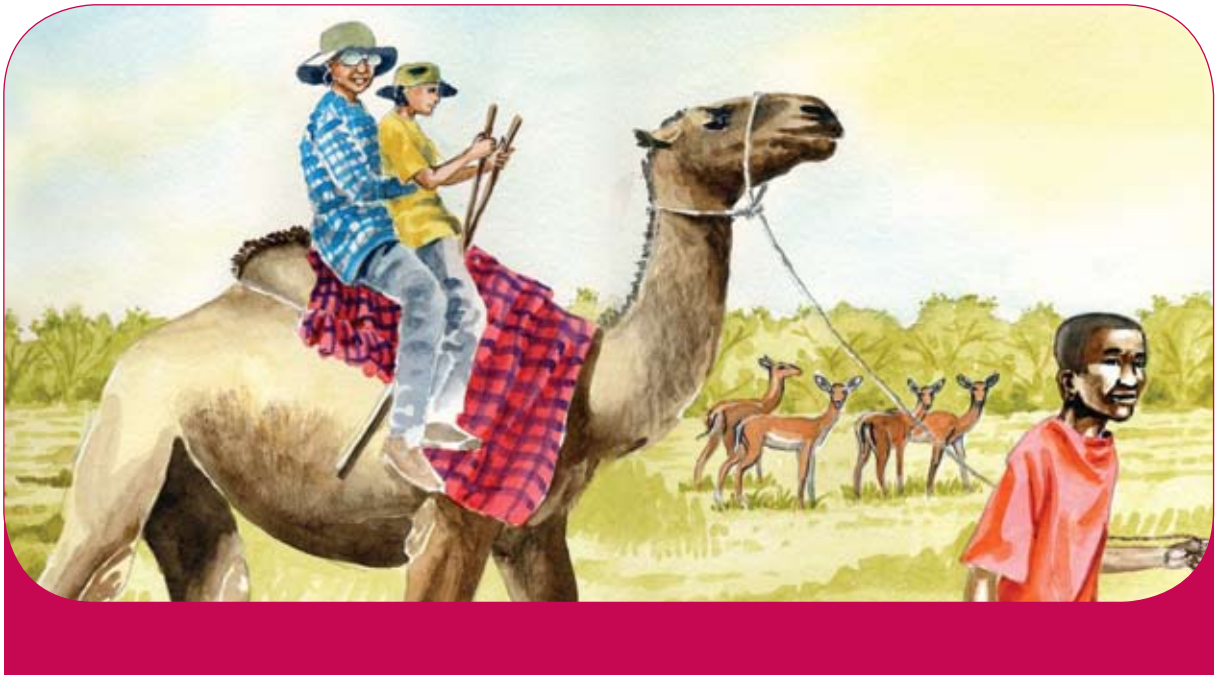
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Wildlife can work for you: creating a conservation-based venture (CBV)



What if you could transform a big problem – something that costs you money, time and heartache – into a thriving business that brings income instead of trouble?

If a lot of wildlife roams your community land; if herding or growing food is difficult or impossible because of wild animals; if your community lies near a national park or other site that draws a lot of visitors ... then you may be sitting on the makings of a very good business indeed.

THE POTENTIAL

Every year millions of visitors from around the world flock to wildlife-rich areas of Africa. For many people it's the dream of a lifetime and they are willing to spend a considerable amount on it. Some get so "hooked" on the experience they come back again and again, looking for "new," less travelled areas.

Over 700,000 tourists visited Tanzania in 2007, collectively spending over one billion dollars U.S. Some estimate that by 2010 a million will tour the country, spending US\$ 1.5 billion.

The Northern Safari Circuit – which includes Mt. Kilimanjaro, Ngorongoro, Tarangire, and Manyara National Parks and neighbouring districts – attracts a major proportion of international tourists. These include both visitors on their first safari and experienced travellers seeking out remote camps and new experiences.

Neighbouring Kenya has been developing its tourism industry for longer; by 2007 received two million visitors, although 2008 saw a sharp drop due to the aftermath of

the elections. According to Kenya's Ministry of Tourism, tourism had been the fastest growing segment of the economy, at about 13 percent a year. Officials expect it to recover its momentum. Tourism accounts for about 12 percent of the Gross Domestic Product, bringing in KSh 65.4 billion (about US\$ 840 million) in 2007.

HOW CAN COMMUNITIES BENEFIT?

Clearly some tour companies, governments, and entrepreneurs are making a lot of money from wildlife. But, for the most part, the communities sharing their home with wild animals get the danger and destruction rather than the rewards.

To help achieve rural development goals as well as ensure that wildlife survives forever, many communities and organizations are figuring out how to build "nature-based" or "conservation-based" business ventures.

Whatever you call them, conservation-based ventures (CBVs) will not make your community rich, but they can help it develop economically and also provide resources to invest in important social services.

In addition, new models are springing up to compensate communities directly for "environmental services" – which often mean keeping up the land management systems they have used for centuries (Box 1).

THINK BEYOND THE USUAL

Visitor-oriented CBVs are not limited to camps and lodges. Visitors also look for entertainment and, increasingly, active experiences, which might include

BOX 1. PAYMENT FOR ENVIRONMENTAL SERVICES (PES)

Conservationists and policy makers increasingly believe that rural communities should be paid for their "ecosystem" or "environmental" services. In other words, if rural people keep a watershed and rivers healthy, they should benefit. If they make an effort to keep a forest alive instead of turning it into charcoal, they should benefit. If they resist the urge to sell rangeland to farmers, they should be paid for the lost economic opportunity.

In East Africa, some organizations are now taking the initiative to pay communities simply for living with their livestock and wildlife as they did in previous days – without building up another business.

The Terrat Easement, Tanzania

One such PES project is in Terrat village in Simanjiro District, Tanzania – a crucial wildlife area near Tarangire National Park. Headed by Dorobo Tours and the NGO Ujamaa Community Resource Trust, with other tourist operators and the Tarangire Elephant Project, the Terrat "Easement" provides financial benefits for Terrat to continue to protect land they already protected as traditional dry season pasture.

The partnership pays Terrat an annual fee of five million TZS. In exchange the village has agreed to prevent farming, charcoal production, and wildlife poaching on the range. In addition, the village requested the operators to fund four village game scouts to enforce and monitor the arrangement. Signed in December 2005, the contract is overseen by a village-level management board of five villagers elected by the Village Assembly for a five-year term.

The village has invested the 15 million TZS received so far in building a primary school and a new secondary school. The total revenues are not large – about \$4,500 – but is discretionary, so the community can use it for its own priorities.

Conservation Lease Programme, Kitengela, Kenya

South of Nairobi, the Nairobi National Park used to be surrounded by communally owned, pastoral land that wildlife roamed during the wet season. Today the park is in danger of becoming an ecologically unsustainable island – a large zoo – by subdivision of surrounding terrain into private plots, farming and fencing, industrialization, urbanization, mining, and land speculation.

Recognizing that both the ecosystem and the age-old livelihood of pastoralism were in danger, a broad partnership of government, NGO and private organizations developed the Wildlife Conservation Lease Programme. The Lease Programme essentially rents land from local Maasai households for conservation – paying \$4 an acre in return for a commitment not to fence, farm, or sell the land.

Starting in 2000 with about 100 acres, the Conservation Lease Programme today safeguards over 11,500 acres, contributing to the livelihoods of over 100 families.

The programme earns households needed cash while enabling them to retain their livestock.

The lease payments also protect participants from crises. During the drought of 1999-2000, the Kitengela community lost more than half their collective livestock. During this period, income from the lease programme amounted to nearly 80 percent of household income for participants – a critical support.

Payments are presented in public ceremonies timed to coincide with school fees, and usually directly to women. The lease programme is funded and run by a broad consortium of organizations led by The Wildlife Foundation and including the Kenya Wildlife Service, Global Environmental Fund, and African Wildlife Foundation, and Friends of Nairobi National Park. It aims to protect 60,000 acres, enough to allow the seasonal migration of wildlife to and from the national park.

anything from riding camels to herding with pastoralists, learning traditional dances, practicing Maasai beadwork, staying in a traditional home or even volunteering in schools or construction projects.

CBVs do not have to be directly concerned with tourism. Crafts, honey, agroforestry, butterfly farming, more efficient livestock raising, "bioprospecting" – selling the right to explore for medicinal plants to a

pharmaceutical or cosmetics company ... just about any enterprise that depends on healthy natural resources, encourages good stewardship of natural resources, and benefits the community is a candidate.

Most communities are likely to have numerous opportunities for CBVs. It helps if community members are flexible enough to think beyond the tried and true – and get some help to make a business happen.



Cattle fattening in a feedlot

STEP 1: GET THE SUPPORT YOU NEED

It takes experience and many skills to select, create, manage, and market a business successfully. Therefore communities usually partner with a facilitator, or "broker," who can help them through the process.

The broker could be a non-governmental organization (NGO), local authority, private consultant, or even business – as long as they have a deep interest in both livelihoods and conservation, plus some experience with CBVs. The broker will also draw in a variety of other experts. Together they provide information and awareness-raising on conservation, the pro's and con's of various business, and the process of establishing one.

The broker and other experts also help the community:

- survey the land and conduct participatory land-use planning;
 - name resources from which the community could build a profitable business;
 - figure out types of businesses that would most help the community benefit for the long term;
 - understand and comply with legal requirements, including getting titles and permits, preparing environmental impact statements, and negotiating contracts;
 - prepare land-use plans, benefit-sharing plans, business plans, environmental impact statements, management and monitoring plans;
- provide business and tourism training, as well as training for game scouts;
 - manage conflicts;
 - find and negotiate with a business partner, or "investor," if appropriate. The business partner would be primarily responsible for developing and managing the business – paying the community for use of land and other resources; and
 - monitor all plans and agreements to make sure they are being followed.

ORGANIZATIONS THAT FACILITATE CBV DEVELOPMENT IN EAST AFRICA

The Kenya Wildlife Service Outreach Programme plays an active role in such ventures in Kenya, as does the Tanzania National Parks Authority (TANAPA) in Tanzania. NGOs with experience in nature-based businesses in East Africa include:

- African Conservation Centre, www.conservationafrica.org
- African Wildlife Foundation, www.awf.org
- Frankfurt Zoological Society, www.zgf.de. German aid, GTZ, www.gtz.de/en
- Wildlife Conservation Society, www.wcs.org, and
- World Wildlife Foundation, www.worldwildlife.org

STEP 2: UNDERSTAND WHAT YOU'RE GETTING INTO

Everyone in the community needs to know what to expect from a business based on the community's natural or cultural assets. The broker will help with awareness-raising. But ultimately it is the community who will be part of the business venture, receiving benefits but also making sacrifices. So everyone needs to be informed and aware of possible benefits, risks, and trade-offs.

Here are some things you can expect and would do well to discuss at community meetings:

The process may be long and complicated

You may need to complete a lengthy list of legal requirements. You may need to register your land, perform participatory land-use planning (see Module Two), create a Wildlife Management Area (see Module Four), and resolve recent or long-standing conflicts (see Module Five). You will likely also need to find and negotiate with a partner (this Module).

Undoubtedly these and other tasks will require many community meetings, plus meetings with local officials, the broker, environmental and business experts, potential business partners, and others.

Tourism is risky

Even if you develop the most beautiful eco-lodge in the world, with the best wildlife-viewing opportunities, visitor numbers can still drop suddenly. Things happening thousands of miles away affect how many people travel: a war, a terrorism attack or fear of one, economic problems The overall trend for tourism is up – over four percent a year in Tanzania – but particular years can yield frustrating results. Are you prepared to deal with large fluctuations in income?

Your community will gain important benefits, and some people will get jobs ... but no one will get rich

Shaping realistic expectations from the beginning can avoid disappointment and conflict later.

It's easy to have expectations that are too high. The proceeds from, say, a thriving tourist lodge, can be substantial – but even so, it will not make individual families rich.

Let's say a tourist lodge earns enough to share US\$ 30,000 with the community. That may be split among six villages, so each gets \$5,000.

If that \$5,000 were split among 1,000 households, each would receive \$5.



Rock climbing tours

BOX 2. KEEPING BEES, SAVING FOREST

"Bees are now livestock like goats and cows," says a member of the Sangaiwe beekeeping group.

The Sangaiwe group is one of a number organized and trained by the Tanzanian Wildlife Research Institute (TAWIRI). Collecting and marketing honey, wax, and other bee products are one way for communities to benefit from keeping the environment healthy and forests intact: The village had created both a forest reserve and a bee reserve. In turn, bees pollinate not only wild plants but also crops.

The group started in 2008 and is expecting its first crop in 2009. Judging by similar groups' experience, individual members may make approximately US\$ 2.00-2.50 per litre.

Challenges remain for the TAWIRI-trained groups, especially marketing, since they often sell to middlemen who take most of the profit.

In Kenya, Honey Care Africa has helped over 9,000 rural residents throughout the country create additional income, providing equipment, training, links to loans, and a guaranteed fair price to its beekeepers.

BOX 3. BEADWORK IN ESELALEI: FRUITFUL COLLABORATION WITH AN NGO

"We'd sell milk if there was milk or grind tobacco for snuff to sell for school fees. But we were very poor," says Noormegiroo Ngayai, chairperson of the Naisha Women's Group of Etselalei.

"Then we started to stand by the roadside, waiting for tourists to come and pay to take pictures of us. The village leaders started asking us, 'Why are your children standing on the road instead of going to school?'"

"The elders helped us form a group, and an MP came to see us and gave us TZS 100,000 to buy goats."

That was in 1999. By the time they linked up with AWF in 2001, the 20+ women of the Naisha Women's Group had tried just about everything they could think of to live up their name, which means "fruitful" in English. The goats helped, but not enough. The group tried selling beadwork, but their setup was so chaotic that tour guides avoided them.

AWF looked at the potential for crafts selling and found trainers to teach the group about design, style, and quality control as well as basic English and business skills.

In 2003, at the women's request, AWF built a roadside crafts centre with space for organized displays. Each piece hanging on the banda's wall sports a label with its maker's name. Photos show how traditional pieces are used in their cultural context, whether as a herder's belt, woman's necklace, or symbol of authority. With its large windows, wrought-iron decorations and latrines for customers, the

centre makes an appealing place to shop.

After the banda was built, monthly income for the group shot up about 1,000 percent on average, although seasonal variation is high. This includes sales as well as a visitor fee of \$20 a vehicle.

"We used to have to beg our husbands and elders to get money for our children. We don't have to beg any more," says Ngayai.

Some of the visitors are connected to enterprises that can market the items in other countries. Last year, the group received an order for 12,000 bracelets from the Earth Birthday Project in southwestern USA. This year Naisha was nominated to participate in the Women's Entrepreneur Fair in Barcelona at the world conference of the IUCN. One representative sold \$1250 worth of products in a week.

In addition to meeting family needs, the group can now contribute to community building and water projects.

But success is not static. Because of their achievements, many other groups now copy Naisha products and display methods. Competition has recently grown fierce, and the women worry about falling sales.

Sooner or later, every successful entrepreneur faces such a situation. What ideas can you think of to help the group come up with fresh products and stay ahead of their competitors?

You can't do a lot with \$5. But \$5,000 is another story. That sum could make a substantial contribution to community welfare. It could re-roof a school, build classrooms, stock a clinic, and contribute to bursaries for school or college. It could even help the community invest in specially bred livestock or intensive agroforestry – depending on their land-use plan.

Therefore most communities opt to use the income on projects that benefit everyone.

Yet there may be other opportunities for increasing household income

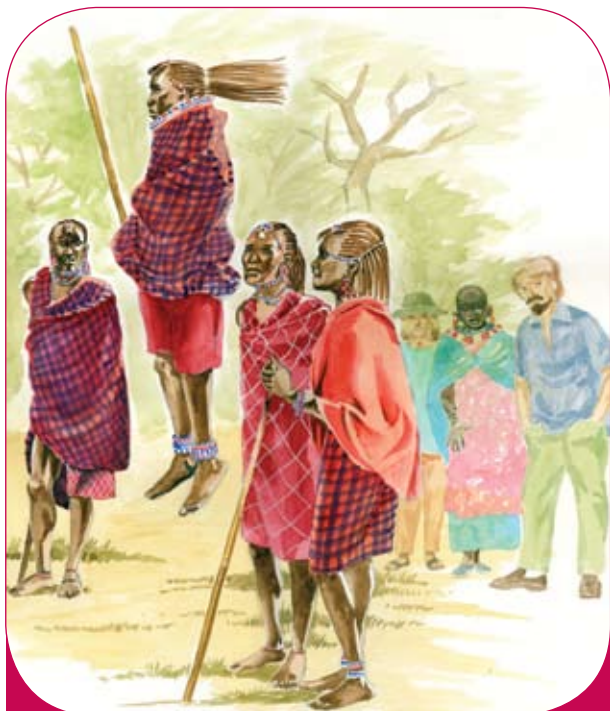
Depending on your resources, groups may be able to develop other sources of income that go straight to members. For instance:

- **Bee-keeping.** Several organizations help community groups produce honey and related products.

Or if a tourism business is developed, this business could help market the honey, wax and other bee products (see Box 2).



Community beekeeping venture



Traditional Maasai performance – a potential venture

- **Crafts.** Many women's groups have raised household income by marketing beadwork, baskets, pots, or other handicrafts. The broker and/or business partner could help women improve their designs and marketing, so participants earn more for their efforts. They might sell the products directly, or link producers with other prospective customers – say shops or hotels in the capital (Box 3).
- **Improved cattle sales.** Pilot projects are now underway to help community members earn more from sales of cattle, by using improved breeds and fattening cows in feedlots.

There are many more possibilities, depending on local skills and natural resources (see Box 4).

What will you do with the money? Developing a benefit-sharing plan

What will you do with the earnings from the nature-based business? Few communities have made enough money to pay households individually from the business. However, substantial sums – \$40,000 or more is not unusual – go to community conservation businesses in Kenya and Tanzania.

Even when divided among a number of villages, this likely comes to many times more than the previous community budgets. So the community will need to agree on a benefit-sharing plan, including the following:

BOX 4. CONSIDER INVESTING IN FOOD PRODUCTION OR OTHER ECONOMIC ACTIVITIES

In addition to community projects for social welfare, consider community investments in other economic enterprises, particularly food production. Many agro-pastoral areas have little rain. And their fragile soils can be exhausted in as little as a year or two of conventional cultivation.

But there are new farming systems, particularly "agro-forestry," that grow a lot in a little space, while enriching the soil and retaining moisture at the same time. Agro-forestry can produce staple crops, nuts, fruit, fodder, fuel-wood, building materials and medicine in the same area, since the plants are arranged vertically – root vegetables to cabbages and maize to shrubs to branches to tree-tops. Careful choice of "fertilizer trees" even enriches the soil, while roots help retain moisture for the crops.

A carefully planned agro-forest can be compact enough to be fenced. Through land-use planning exercises, you should already know where not to plant (i.e. not in the middle of an elephant corridor).

Contact www.worldagroforestry.org for more information. For information on increasing water supplies for farming and other uses, contact the Southern and Eastern Africa Rainwater Harvesting Network, <http://www.searnet.org>

- Who will manage the income?
- How will transparency be guaranteed?
- How will it be distributed?
- Do you have a list of community priorities to which payments will go? (e.g. schools, clinics, scholarships for university, water sources, veterinary health ...?)
- How will you monitor the income to ensure that it goes where you decided?

STEP 3: MARK YOUR BOUNDARIES

It's important to hire professional surveyors so the exact borders of ranches, villages, conservation areas, year-round grazing, dry-season grazing, and settlement areas, etc. are clear to all. Mark boundaries with beacons – large containers filled with concrete – or other objects that are hard to move. See Module 2 for more information on land-use planning and land registration.

CAUTIONARY TALE: SURVEY BEFORE OR REGRET AFTER

In one village in southern Kenya, a team of community members and experts did participatory land-use planning, mapped the village and concession area, agreed on zones for farming, grazing, settlements, and water points. The boundaries seemed to be common knowledge, so a licensed surveyor was not hired.

After a huge amount of work by all parties, an investor signed a contract with the village. In return for land and photographic safari rights, the investor built a beautiful tourist lodge and agreed to pay an annual lease fee, fees for every tourist who stayed there ("bednight" fee) plus other charges.

All went well until one day someone from a neighbouring community arrived. "Your lodge is on our land," he announced. THEN the surveyors were called in. It turned out that although everyone "knew" the boundaries, everyone was wrong. Suddenly there was a third party with whom to negotiate and who claimed a share of the proceeds.

STEP 4: EXPLORE YOUR RESOURCES. THINK BROADLY AND CREATE A "DREAM LIST" OF BUSINESS POSSIBILITIES**WORDS OF WISDOM**

"The most important thing for the community is to know what resources you have. These resources will guide what kind of enterprise you develop. Your neighbours may have a lodge – but maybe your area is too small. But then it may have special plants or birds. Or flowering plants that attract bees. Landscape is a resource too: maybe it's dramatic, with mountain or lake views. Proximity too can be of value: are you close to transport? Are you located near a national park, or on a circuit that tourists already make?"

*Thadeus Binamungu,
Senior Project Officer, AWF-TZ*

WHAT HAVE YOU GOT? BACKGROUND FOR A "SCOPING EXERCISE"

Natural resources: What kind of natural assets does your community contain? Large wildlife? Endangered or rare wildlife? Medicinal plants? Flowering plants that attract bees? Rivers or lakes, wetlands? A large variety of birds? Dramatic landscape? Striking vegetation, such as baobabs or fever trees?

Human resources: Do you have people who excel at traditional crafts (beading, pottery, mats and baskets)? What about trackers, hunters? People who are trained in business, accounting, catering, hospitality? People who love to sing and dance? Or tell stories? Or are passionate about trees?

Nature-based ventures include far more than camps and lodges! An area can only handle so many lodges in any case – from both an environmental and economic point of view.

Encourage your community to think and dream more broadly.

At this "dream stage", community members form a team with experts from a variety of fields including: tourism, forestry and non-timber forest projects, agriculture, livestock, business, marketing, and government. The team drives and walks around the terrain to create a long list of business opportunities based on what they see. They also inventory skills among community members for further ideas.

Here are some resources and related business ideas you might list at this stage (Table 1).

Human resources

You can also do an inventory of local skills. Perhaps some residents are knowledgeable or passionate about certain activities (Table 2).

The team might come up with an initial list of, say, five enterprise options for tourism, plus beekeeping and a mushroom venture. Tourism efforts might include: a lodge that might sell crafts in its shop; a mobile campground, a chance to go herding with an elder; walking safaris in the buffer zone of the conservation area; and a banda for performances of traditional dance and folktales.

TABLE 1. COMMUNITY RESOURCES AND BUSINESSES THAT COULD BE BUILT ON THEM

Resources	Potential Business Options
GEOGRAPHY	
Hill or mountain; river or lake	Setting for a tourist lodge
Water bodies	Kayaking, canoeing, tubing, other water sports
A spring or streams with clear water	Bottling of spring water
Hot springs	Health spa
Cliffs, craggy mountains	Rock climbing
Shady places with alluvial soils	Site for mushroom farming
Well watered land	Compact agroforestry for local consumption as well as to market fruits and vegetables to area restaurants (see Box 4 on agroforestry)
PLANTS	
Medicinal plants	"Plant walks" for visitors "Bio-prospecting": selling medicinal plants to a pharmaceutical company in return for a royalty
Forest	Non-timber forest products
LIVESTOCK	
Improving production	Improved breeds, perhaps feedlots and abattoir
For tourism	Take visitors herding
HISTORICAL AND CULTURAL RESOURCES	
Rock art	Tourism; trekking
Historic, legendary sites	Tourism
Residential or cultural boma	Performing arts; involve visitors in dance, music
Handcrafts and visual arts	Designing and selling beadwork and other crafts; offer classes to visitors in beadwork

TABLE 2. INVENTORY OF SKILLS

Knowledge or interest	Job possibility in CBV
Business	<ul style="list-style-type: none"> - Accounting - Hospitality - Cooking, catering
Skill with animals and plants	<ul style="list-style-type: none"> - Herding - Tracking animals or hunting - Preparing and using medicinal plants - Gardening, raising specialty products like herbs
Handcrafts and visual arts	<ul style="list-style-type: none"> - Beading - Leatherwork - Pottery, basketry or other crafts - Painting - Woodwork, furniture making
Performing arts	<ul style="list-style-type: none"> - Dancing, singing - Story-telling - Drama for tourism or educational enterprise

STEP 5: EVALUATE YOUR OPTIONS

This stage is known as "due diligence." Due diligence means analyzing prospects more closely to figure out how well they might actually work, plus their likely effect on the community and environment. Both potential benefits and potential pitfalls should be considered.

CAUTIONARY TALE: DUE DILIGENCE ON A PROSPECTIVE PARTNER

In northern Tanzania, an investor requested 100 acres on which to build a tented camp. At first he honoured his commitment to pay the community \$10 a bednight. But soon the fees stopped coming.

It seems this investor had applied for a major loan and used the lodge as collateral. He kept the cash while the bank took possession of the lodge. The bank then sold the camp to another investor, without consulting the community.

This situation just might have been avoided with enough due diligence on the investor: his assets, financial history, and experience in other communities.

Fortunately, the story has a happy ending. Although he claimed it was a surprise, the new investor agreed to the bednight fee. In addition, he actively marketed the site and is earning far more money for both the company and the community than before. Income to the community has funded schools, health centres, a vehicle, and bursaries.

Evaluation focuses on information such as:

- How many livelihoods might a given project improve?
- How might this project affect women, men and children?
- How might it affect wildlife and habitat?
- Water and soils?
- What kinds of technical resources would it require?
- What kind of infrastructure would need to be built, and who would build it?
- Is it likely to require, and attract, a third party for management and investment – private sector, donor, or both?
- What experiences have other communities had with this type of venture? See Box 5.

By the end of this phase, you may want to have 5–7 options, all of which would be good for the community and, considering your location, requirements, competition, etc., all of which are feasible.

STEP 6: PREPARE INITIAL BUSINESS PLANS

A business plan goes into more depth about what a given business will require, its strengths and weaknesses compared to its competition, and what returns are expected. It will also feature a "SWOT" analysis, making explicit a given business:

- **Strengths:** special assets and advantages compared to competitors. For instance, it may have more wildlife than any other area near a particular road.

BOX 5. WHAT ABOUT HUNTING?

In some countries, communities benefit greatly from legal tourist hunting safaris, and in return control poaching and enable wildlife to make a dramatic comeback. In Namibia, for instance, communities keep 100 percent of income from wildlife, including hunting. Over the last decade, 50 communities have formed conservancies, which now earn collectively about US\$ 2.5 million (TZS 3 billion) a year. Some conservancies earn over US\$ 100,000 (TZS 120 million) a year. Even populations of previously endangered animals like rhino are surging on community land.

In Tanzania, however, hunting concessions continue to be leased by the central government, and communities reap a fraction of the earnings. Wildlife Management Areas were created in the last few years in the expectation that communities could control hunting on their own land, but policies are still in flux (see Module 4). And wildlife is still declining in most areas.

Kenya, which prohibits hunting, is also seeing sharp wildlife declines except in areas where communities have developed successful CBVs.

Hunters spend far more per person than those on photographic safaris, because of licenses, trophy fees, etc. But many more people can go on photographic safaris in any one area. In addition, photo safaris tend to use more infrastructure: camps, lodges, roads, so may be able to generate more jobs and income through other services. (TNRF 2008)

- **Weaknesses:** e.g. it might not have a steady source of water
- **Opportunities:** e.g. it's close to an established tourist circuit; a resident already owns camels. If the enterprise adds a camel walk, that might induce visitors to stay an extra bednight ...
- **Threats:** In Tanzania, for instance, it might be in an active hunting block, which could conflict with a photographic safari venture.

The business plan also reviews things such as competition, legal and tax environment, investment needed, infrastructure needed, management and monitoring challenges, marketing possibilities, staff needed from the community and from outside, time needed to launch, income targets over a year and five years

STEP 7: ATTRACT POTENTIAL BUSINESS PARTNERS

If a business would require a lot of investment and/or special skills, a partnership might work out best. Again, your facilitator will help find an appropriate business partner, or "investor."

They should make sure that the investor has what it takes to make the business work: the experience, funding, ideas, commitment to the community, and concern for the environment.

Ways to find a business partner

a) A business "prospectus" can help start the process. An attractive and informative publication – probably produced with the help of a partner – the business prospectus answers basic questions that any investor would ask:



Community mushroom growing enterprise

- Why should an investor consider this business as opposed to another opportunity s/he might find?
 - What are your special assets and resources – from infrastructure to wildlife to cultural attributes – that would help make a business profitable?
- The prospectus would be given to potential investors you may already know. It can also be widely distributed through email or other channels to lists of businesses.

b) **Contact known investors.** Approaching business people who have already invested in similar ventures is an obvious route to finding a compatible partner.

Beware of expectations: "If a partner has also been a donor in the community – perhaps built a clinic – community members might have expectations of more charity from them. These expectations can be dangerous ... can lead people to think they're in line for handouts. But to be sustainable, the business needs to be built on clear business principles, not charity."

Ben Mwangela
AWF, Kenya

c) **And/ or: Hold an "investor forum" and tour.** At an investor forum, representatives of experienced businesses meet with the NGO and community members. You present the business opportunity and take questions from those interested. The investor forum would likely be followed by a tour of the property, individually or in a group.

d) **And/ or: Advertise a "tender."** Through a personal invitation or even a newspaper advertisement, companies are invited to "bid" – send proposals – on the business opportunity. Each interested company writes a proposal, detailing how they would build a community-friendly, environment-friendly business.

You might ask for bids to include:

- How much the company would be willing to pay for leasing, bed-nights, community trust fund, conservation and other fees
- Commitments to local employment and training
- Infrastructure they are willing to build, and who would own it
- Types and scale of marketing efforts promised to ensure good returns
- The length of lease desired

- Measures to ensure care of the environment, such as solar energy, recycling plans, water conservation ...
- Other ventures with the community: E.g. would they be willing to market local honey or crafts, or link artisans with other markets? Would they be willing to buy them for their own enterprise, for instance buy mats or thatch for a lodge.

STEP 8: CHOOSE A PARTNER

Ideally, your efforts will have turned up several good possibilities. Now a team from the community, the facilitator, the government, and other stakeholders reviews and compares the bids and agrees on the winner.

STEP 9: NEGOTIATE A DEAL

You have a proposal. But negotiation will nail down the details of: Who gives what? Who gets what? Who does what? See Box 6.

Here are some items commonly negotiated. Some fees may be set by government regulation, but even

those are open to negotiation above a specified minimum.

- **Ownership of venture:** Will the community co-own the business? Or will it have an option to do at a specified date in the future?
- **Ownership of structures:** It's better if the community owns all "immoveable" assets when the agreement is finished. For instance, the community would own a lodge or boating dock, while the company may wish to own "moveable" assets: furniture, kitchen equipment, decorations, etc., which they can remove at the end of the contract.
- **Conservation management:** Is the community willing to honour its management zones, particularly those for settlement; grazing; grazing during drought; wildlife only? Would you accept enforcement of the zones, through game scouts or other authorities?
- **Exclusive Use:** Is the community granting "exclusive use" of its conservation area to the investor? This is usually a good idea. It also typically results in higher payments.

BOX 6. WHAT'S A "GOOD" DEAL?

You might hear, "Company X is giving the community \$50 a bednight and we're only getting \$10!" Or, "Company Y is contributing to the Community Trust Fund but ours is only giving conservation fees!"

Just as every site and community is different, each deal is different. Any particular contract will depend on the legal framework, the specific resources, skills, attitudes and needs of the negotiating partners and the trade-off's they are willing to make.

In one place, a lodge might already have been built, so lease-rates may be higher; in another place, the investor must add buildings, so lease or other rates might for the moment be lower In one community, jobs and water sources might be a higher priority than viewing fees; in another, the investor contributes to a trust fund, so contributes less to bed-nights, and so on

The only thing that's sure is this: Community and investor must find a "win-win" solution. Each partner needs to feel that they may not be getting the "perfect" deal, but a "good" one. Negotiation experts emphasize that if either side feels exploited, the agreement is likely to fall apart.

It's easy for expectations to become unrealistic. And it's likely that you will not get everything you want. But here are some questions to consider before you sign:

- Will the deal provide considerably more than you would be getting without it?
- Is the arrangement good enough to make a real and positive difference to your community?
- Does the agreement make it worthwhile for the community to adhere to zoning agreements, i.e. limit when or where grazing or agriculture is done?
- Is it enough to fund significant, long desired infrastructure or services for the community?
- Does the other side seem happy? This is important for them to remain committed!

Perhaps it's not the best deal you wished for, but it may well be good enough. Then stick with it!

- **Payments to community:** In return for access to agreed-on areas of community land, investors commonly pay:
 - Annual lease fee
 - Bed-night fee (payment per visitor per night)
 - Conservation fee
 - Community trust-fund fee
 - Performance fees, if community wishes to include performing arts or other cultural offerings.

Again, there could be more or fewer – the mix and amounts are all negotiable.

- **Employment:**
 - **Numbers:** If local employment is important to your community, negotiate that a percentage (at least 60 percent) of staff come from among local residents. They can be construction workers, guides, guards, wait staff, entertainers... A training package and skills upgrading programme might be needed as well.
 - **Recruitment:** How will community members be recruited? Community involvement may help make sure local candidates are considered and offers made fairly.
 - **Wages:** How much would the company offer? Is this in line with other local, paid employment? Is it better than returns community members might expect from raising livestock or other traditional activities?
- **Environmental management:** "Eco-tourism" implies conducting business in a way that sustains the entire living community – the "ecology" of the land and people. For the good of your community and the world at large, you can request that the company employ current best practices in eco-tourism and clarify their plans for their Environmental Management System (EMS). See Box 7 for ideas.
- **Duration of partnership:** If the partner is investing substantial funds, they might ask for a longer period (10–20 years with the option to renew) to make back investment and add profit.
- **Escape clause:** But what if the business is not doing well? Particularly if the company has little experience in tourism, consider an "escape clause" to let the community terminate the contract in case business drops below a certain point for a certain period of time. Understand, though, that visitor volume can plunge temporarily because of national or international events beyond the control of any company.

BOX 7. HOW "ECO" IS YOUR TOURISM?

"Eco-tourism" is more than a buzzword. It's state-of-the-art, responsible tourism.

Governments generally require any CBV to prepare an "Environmental Impact Assessment" to help avoid unintended environmental damage. But eco-businesses go beyond minimum requirements and can charge premium prices, since environmental responsibility is valued by many customers.

To claim eco-tourism status, a business should be environmentally friendly behind the scenes as well in ways that show. For an "eco-lodge," for instance, that means responsibly handling:

Energy: Many sustainable tourism enterprises are using "renewable" energy: energy sources that cannot be used up. Increasingly, operators are erecting solar panels for electricity; tanks for solar water heating; wind turbines for electricity. Instead of firewood or charcoal for cooking, some ventures use fuel briquettes made from waste. Around Maasai Mara, at least one NGO (the *Millennium Fuel Project*) is helping women's groups make briquettes for home use and for sale to safari camps.

Waste management: Some lodges compost "green waste," mostly food waste, and use it to enrich their own vegetable gardens. Non-degradable waste (tin, glass, paper, batteries) can be trucked to appropriate locations to be recycled by manufacturers. "Constructed wetlands" treat sewage and other liquid waste in a series of interlocking ponds. Special types of plants remove toxins and bacteria from the water, purifying it for reuse.

Water conservation: Scarce water sources are a growing source of human-wildlife conflict. Lodge operators can conserve water by asking guests to reuse towels and use less water. They can install "low-flow" showers and toilets. They can capture rainwater. They can help the community grow trees for fuel as well as to protect water catchments.

For more ideas, see www.ecotourismkenya.org.

- **Regular reviews:** You might plan for a review every quarter or so, to see what's going well and what's not, how the agreements are being kept, and how the community and business partner together might manage any problems.

EXAMPLE OF CBV: KOIJA STARBEDS, LAIKIPIA, KENYA

During the drought of 1997–2000, the Koiya Group Ranch in Laikipia, northern Kenya, lost 70 percent of their live-stock. Since drought appears on the rise, the pastoral community could clearly benefit from supplementary livelihood strategies. In addition, it is located in one of the most wildlife-rich ecosystems of the country outside protected areas and next to Loisaba Ranch, a successful upscale tourism operation.

In 2001, the owners of Loisaba, African Wildlife Foundation, and the community formed a partnership (the *Koiya Conservation Trust*, KCT) to open a luxurious but very simple lodge facility on community land. The Koiya Starbeds are essentially sophisticated treehouses in the wilderness, modelled after a similar facility that was working well at Loisaba.

What distinguishes the Koiya enterprise are its corporate structure and the fact that the physical facility and services provided are straightforward enough so that all staff come from the community.

The enterprise is owned and overseen by Koiya Conservation Trust – a partnership of AWF, Loisaba, through Oryx Limited, and the community. KCT's is governed by a board of trustees, two of whom come from Koiya Group Ranch, two from Loisaba, and one from AWF.

Thanks in large part to the established business at Loisaba, the Koiya Starbeds made a profit from year one. By 2007, the community had received over US\$ 77,000, most of which went to community development projects, including school bursaries in the "Conservation for Education" project. Allocations are determined by group ranch members at the annual general meeting.

In addition, 25 community members are employed, while some 30 young people and 45 women earn a living from performances and handcrafts at the cultural village, a spin-off enterprise.

Land appears to be regenerating with wildlife increasing. Thanks to the benefits, community interviews show that attitudes toward wildlife have also become more positive. KCT expects the business to keep growing and making a deeper impact on livelihoods.

As you negotiate:

- Which of these improvements is your partner planning or willing to implement?
- Which might they be willing to help the community implement?
- Encourage your partner to consider becoming certified by a recognized eco-tourism society (see Box 7).

STEP 10: FORMALIZE THE AGREEMENT

- Make sure that everyone understands what the agreement means: what you get, but also what you commit to doing or not doing.
- Make sure that everything you have agreed to is in writing.
- NEVER start building until everything is understood, agreed to, and signed.
- Make sure that the agreement allows for regular reviews of how the business is going from each side's point of view, and possible modification if necessary.

STEP 11: MONITORING, REVIEWING AND AMENDING

The reviews mentioned above might be scheduled quarterly or even more often at the beginning. Taking place at general meetings, they will update all parties on such questions as:

- **Agreements:**
 - How well are all agreements being kept?
 - If there are trouble-spots, how will the parties resolve them?
 - What progress has there been on managing any conflicts noted in the previous review?
- **Business targets:**
 - Are construction and other targets, such as numbers of visitors, on schedule?
 - If not, why not? And what can be done so that things go more according to plan?
- **Community income:**
 - How much funding has the community received, compared to what it expected?
 - What is the community doing with it?
 - Does that match with agreements and plans?
 - If infrastructure is being built, is it on target? If not, what can be done?

- **Effects on the community:**

What changes have been experienced or observed in livelihoods, whether positive or negative?

What changes, if any, have been observed in gender relations due to changes in the community economy or workload?

- **Effects on the environment and wildlife:**

What effects or changes have been observed on pasture, soils, water sources, or wildlife that could be related to the CBV or to visitors?

If positive, how are they likely to affect the community and the CBV?

If negative, how might they be countered?

Key points to remember

1 Rural communities often have more business opportunities than they might think, and more resources, both human and natural. For instance, dramatic landscape or even a rock face may be valuable in the tourism market; beekeeping earns thousands an income in East Africa alone. It may help to partner with an NGO or other organization to help develop a nature-based business.

2 When communities partner with an investor, community incomes vary widely, depending partly on the type of business and partly on the negotiating skills of the community and its facilitators. It's vital that all transactions be transparent and the entire community understands and commits to the business and the terms of the contract.

3 It's important to consider how to share benefits and keep the accounts transparent before the income starts flowing. Unless income is considerable, it may make more sense to invest it in education and health facilities and other community projects, rather than divide it up per household. But individuals might also find a market for their craft or honey or other products through a larger CBV.

4 New forms of benefits are emerging for those who live with wildlife. These include payments to a village to help support their traditional land management system; and, where land is already subdivided, payments to households. It is vital that the income support what individuals already wish to do, such as continue pastoralism or other sustainable uses of the land.

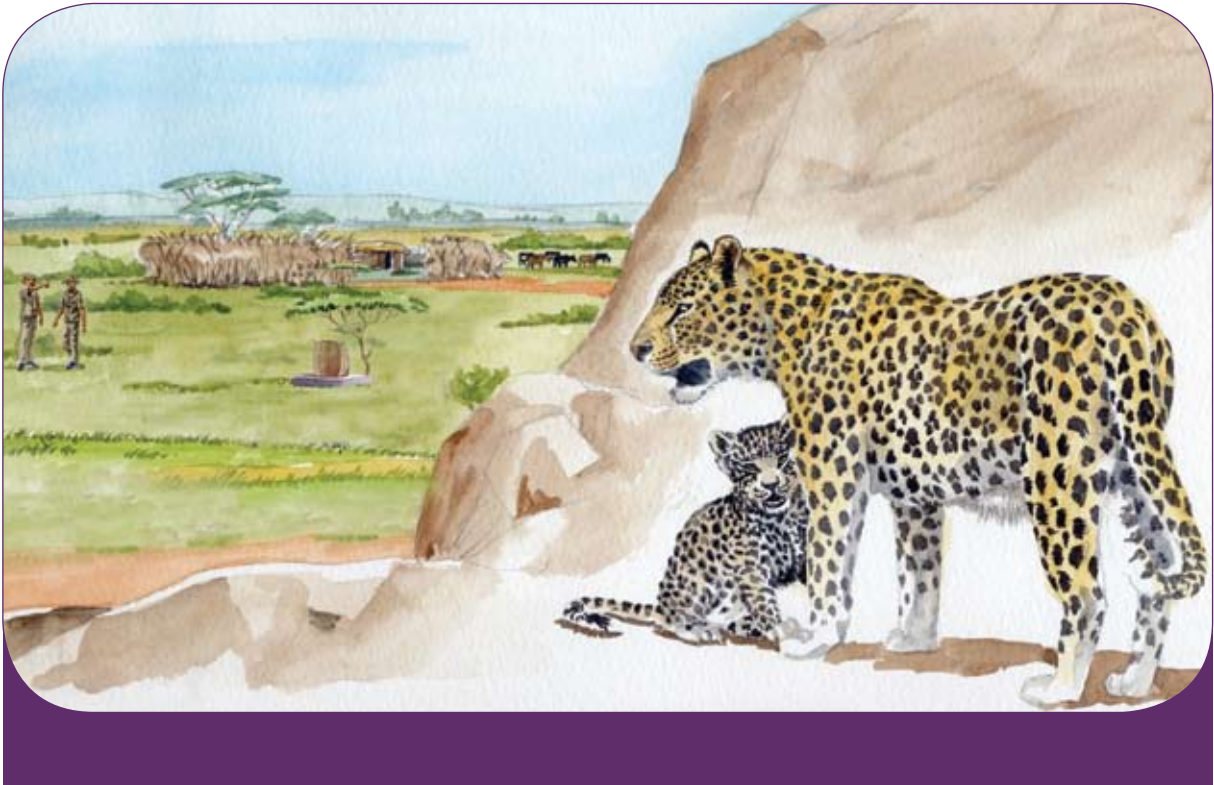
Key points to remember

Wildlife can work for you: creating a conservation-based venture (CBV)

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Wildlife Management Areas (WMAs): benefits, challenges and steps



Wildlife can endanger a community's livelihoods and people – or become its greatest natural asset. If you're trying to farm or graze, elephants and lions can wreak havoc. But if you're willing to be flexible and make some effort, the same animals can attract income, jobs, and a link to the outside world.

Where wildlife still roams in significant numbers, governments are allowing communities to create wildlife sanctuaries – particularly in "buffer" areas surrounding national parks or other reserves, and in "corridors" where animals move from one park to another in search of food, water, and mates.

WHY WILDLIFE MANAGEMENT AREAS (WMAS)?

WMAs serve a double purpose. They sustain Africa's unique inheritance of wild animals – a heritage so special that it draws millions of people from around the world every year.

Second, they allow communities to charge fees from these visitors for the privilege of viewing the wildlife and / or overnighting on their land. Previously, nearly all income from visitors went directly to tour operators – often based overseas – and governments.

Each country has different names, laws and policies names for community-owned conservation areas. Some, like Namibia, allow 100 percent of profits to stay in the community. Kenya allows communities to

keep all income, except for taxes, from non-consumptive uses of wildlife on their land.

Tanzania's 1998 Wildlife Policy states that WMAs will ensure that "local people will have full mandate of managing and benefiting from their conservation efforts", although legal ownership of wildlife resources remain with the state. However, the WMA regulations of 2002 state that benefit-sharing will be defined "by circulars issued from time to time". The most recent circular requests that income from conservation-based businesses go directly to the Government, which will then remit a percentage to villages.



Wildebeest migration



Wildlife attract tourism

WHY THIS MODULE?*

Creating a WMA is a community-led effort. The process is designed to be transparent and involve many local residents representing all local interests.

It is also, however, lengthy, bureaucratic, and costly. Communities will not likely be able to accomplish it without extensive outside expertise, facilitation, and funding.

This module is designed mainly to let community members and leaders know what to expect for both process and results. It does not substitute for government guidelines but should allow communities to follow the guidelines with greater ease and understanding.

Government requirements differ by country and the guidelines included in the module's appendix are for Tanzania. However, suggestions for participatory planning and other activities will likely be valid for most wildlife-rich communities in East and Southern Africa.

THE PATH TO A WMA

The process takes the community through the following seven phases:

1. Awareness-raising about wildlife, land-use, and common rights
2. Agreeing through the village assembly to proceed
3. Land-use planning and zoning for the WMA
4. Registering a community-based organization (CBO) to become a legally recognized Authorized Association to manage the WMA
5. Gazetting the WMA and obtaining legal rights to wildlife
6. Working with an investor to create a community-based venture
7. Monitoring the WMA

DIFFICULT BUT VALUABLE

The process is long and cumbersome. But the WMA is the only system existing in Tanzania at the moment that gives legal authority for local people over wildlife. Not 100 percent ownership, but the power to manipulate and use wildlife resources for their benefit

At first people thought WMAs were a ploy to take away their land. But in reality it's just the opposite.

*Steven Kiruswa,
Maasai Steppe Heartland Director,
African Wildlife Foundation, Arusha*

* The Wildlife Division of Tanzania's Ministry of Natural Resources and Tourism has put together a Reference Manual for Implementing Guidelines for the Designation and Management of Wildlife Management Areas (WMAs) in Tanzania. The current Module focuses on critical steps for the community, but does not repeat the manual. Particulars for issues such as which officials to involve, and how to file plans and apply for permissions, make sure to check with the Manual and wildlife authorities.

CREATING A WMA: BASIC STEPS

Step 1: Awareness-raising and preparation

Since WMAs will be on communally owned land and communally managed, all members of the community must agree, or “consent” that they would like to proceed. To make a wise choice, people need full information about what a WMA is, the costs and benefits of setting one up, and the official procedures for designating a WMA.

In step 1, a sensitization team works with the community to provide this information and answer all questions and concerns. The sensitization team could include staff from the Wildlife Division, District Council and other government institutions. In addition, a non-governmental organization (NGO), community-based organization (CBO), or consultant is likely to help with sensitization as well as the rest of the process.

TAKE CARE OF IT BEFORE IT GOES ...

I want people to know that if somebody doesn't take care of the wildlife, and other natural resources, they will disappear. WMAs give people a way to take care of these things – the trees, which hold water in the ground and help keep the rivers flowing; the grasses that support our livestock; the soil that supports the grass. And the wild animals, which, if you use the resources wisely, can give you tangible benefits.

*Seraphino Bichabicha Mawanja,
District Game Officer, Monduli District, Tanzania*

Step 2: Agreeing to proceed

Grass-roots education about the pros, cons and procedures of establishing a WMA will help community members decide whether to go ahead or not.

The Village Council recommends that a WMA be created in a particular area, but the community must agree by consensus (village assembly) to move forward. It's essential that all voting members, all adults of the villages involved, understand what the WMA will mean and agree to cooperate with zoning and other requirements.

WE'VE ALWAYS MANAGED LAND

“Land management is not a new idea. Traditional Maasai, for instance, have always used a management system. They'd graze livestock in rotation: in the lowlands during the rainy season and uplands in dry season. That way

both areas recover. In addition, every warrior – moran – could tell you the indigenous trees, and would protect them if they're used for medicine. Traditionally, Maasai would only cut trees down if building a boma, so the trees could recover. Now, with more and more people living on the land, there's not so much opportunity to move, and people are cutting trees at random. The planning exercises and WMAs help everyone reach a consensus that benefits people, the land, livestock and wildlife too.”

*Enock Chengullah, Wildlife Officer,
Tanzania Natural Resources Forum (TNRF)*

Step 3: Forming a community-based organization (CBO) and Authorized Association (AA)

Since most WMAs will be formed from land from two or more villages, each village elects representatives to a multi-village, community-based organization (CBO). The CBO initially drafts a constitution and creates a strategic plan for the WMA.

The CBO's constitution covers roles and responsibilities, financial management, and methods of solving conflicts.

The strategic plan includes:

- the vision of the community for the WMA;
- how the vision will be accomplished—objectives and activities; and
- how the WMA will be monitored and evaluated.

When fully registered with the government, the CBO will become the Authorized Association (AA) – authorized to manage the WMA and its wildlife.

Step 4: Land-use planning and zoning for the WMA

Planning is key to a successful WMA. See Module 2 for principles of community-based land-use planning.

Planning for the community's WMA is similar, but may involve more people than village-level planning, since WMAs overlap with several villages at once. In addition, the various villages will also develop a Joint Village Land Use Plan.

In consultation with the community, the AA will create a land-use plan plus a

- General Management Plan or a Resource Management Zone Plan for the WMA, and an
- Environmental Impact Statement on how proposed activities will affect the health of the land, water, wildlife and other resources.

FREQUENTLY ASKED QUESTIONS

To help clear up confusion, here are some frequently asked questions about WMAs.

What exactly is a WMA?

A Wildlife Management Area is village land agreed on and demarcated by one or more villages, primarily for wildlife conservation and for businesses based on wildlife conservation. When neighboring villages set up a WMA, they

- agree to help protect wildlife;
- have the right to create businesses or contract with others to create businesses based on that wildlife (e.g. tourism facilities); and
- receive income from those businesses and decide collectively how to share it and spend it.

Communities agree on zones within a WMA that allow for

- dry-season grazing and wildlife;
- businesses related to wildlife (e.g. a tourist lodge); and
- other uses, including existing settlements and farming.

What is a Wildlife Management Area NOT?

A Wildlife Management Area is **NOT** year-round village pastureland or agricultural land, though there may be zones within the WMA that feature those functions.

Importantly, too, a WMA is **NOT** a national park. Nor is it an extension of a national park, a future national park, district-level reserve, or privately owned conservation area. The villages may license private businesses to build facilities or otherwise operate within parts of the WMA (e.g. a campground; night-time game drives). But the community must agree to these areas and activities, and receive some of the proceeds and possibly other benefits, such as employment.

Why should we encourage wildlife to increase when they get in our way?

- Communities can make a substantial amount of money from businesses within WMAs, and WMAs may make communities more attractive to businesses.
- WMAs are the only way undisputed in the law for communities to make income from wildlife in Tanzania.
- The WMA mechanism provides a way for local residents to plan, manage and benefit from their own land.

- The process of planning and administering a WMA gives local communities an added mechanism for resolving disputes, i.e. over use of land and water, wildfires, harvesting of natural resources, and with wildlife.
- Villages can take pride in conserving a timeless heritage found nowhere else in the world.

Does agreeing to a WMA mean that villages give up land?

No. In fact you can only create a WMA if your village is securely registered, and the WMA officially registered as well.

However, if you choose to proceed, you would agree to limit or exclude certain activities within certain parts of the WMA. For instance, communities agree that residents will not graze livestock in specific areas, during at least part of the year.

Agreeing to certain zones free of livestock reduces the possibility of human/wildlife conflict, also allows wildlife to rebound, and creates areas of great potential interest to visitors.

Will all the benefits go to the government?

No. Currently, investors are requested to pay the Government, but the Government returns a portion to the villages. This requirement is still under debate, and many are hopeful that policy will shift so that investors pay villages directly.

Why are there so few WMAs?

WMAs are a relatively new concept in Tanzania. The Tanzania Wildlife Policy of 1998 provides for them, but regulations and guidelines for WMAs were not released until 2002.

In addition, the process for establishing WMAs is not something that a community do either easily, quickly, or by itself.

In 2002 the government authorized 16 pilot WMAs. As of September 2008, 10 had been formally gazetted (according to TNRF).

But interest is growing swiftly, and communities that have established WMAs and conservation-based ventures report substantive benefits and satisfaction.

Can members of a WMA control hunting?

At this time, the central government, not the community, issues hunting licenses for residents and for tourists. In

(cont.)

FREQUENTLY ASKED QUESTIONS (cont.)

In addition, because most potential WMAs are located in hunting blocks, there have been conflicts between hunting companies and WMA investors who conduct non-hunting safaris. As of this writing, hunting block concessions are scheduled to end in 2009. Many see the termination of current hunting blocks as providing an opportunity to allow communities to fully manage and benefit from local hunting. Debate on this issue is sure to continue.

In the late 1990s, the 19 WMA villages in the *Matumizi Bora ya Maliasili Idodi na Pawaga* (MBOMIPA)¹ project near Ruaha National Park were allowed by the Wildlife Division to sell licenses to resident hunters. MBOMIPA project sold the hunting quotas. In 1997, they began to sell to the highest bidders in a public auction, steadily increasing earnings from about TZS 5 million in 1996 to over TZS 20 million in 2003 (about US\$ 1,000 per village).

How is a WMA formed?

Helping the community understand the items addressed above and decide whether to go ahead is the beginning.

Next steps include forming a planning team of residents and facilitators; forming a community-based organization (CBO); getting it officially registered. The planning team will compile information on current uses and potential for a WMA area, solicit community concerns and objectives for the WMA, involve a variety of government and non-governmental stakeholders, produce Environmental Impact Statements, and create a General Management Plan or a Resource Management Zone Plan for the WMA.

In doing so, the team and outside experts will need to

comply with the Wildlife Conservation (Wildlife Management Areas) Regulations of 2002 and the Guidelines for Designation and Management of Wildlife Management Areas of 2002.

Must a community form a WMA to arrange a CBV?

No. You can negotiate a good contract with an investor without a WMA, although there may be legal advantages to having a WMA. One of the chief advantages is the possibility of either prohibiting or capturing the income from hunting, although this benefit may be in question at this time. Another advantage is that tourist companies will be attracted to areas in the best condition, with the most wildlife and WMAs help ensure that the scenic and wildlife conditions will be optimum.

However, scholars point to Ololosokwan village in Loliondo District as the most successful case of community income from wildlife in Tanzania, and it is not in a WMA. Well run, community-oriented lodges and campsites pay the Ololosokwan community more than US\$ 55,000 a year from lease and bed-night fees as well as providing jobs, including game scouts. Collectively, seven villages in Loliondo reap US\$ 300,000 a year without a WMA (Nelson, 2007).

¹ *Matumizi Bora ya Maliasili Idodi na Pawaga* stands for Sustainable Use of Natural Resources in Idodi and Pawaga.

These documents describe which activities or types of development people may pursue in different parts of the WMA, and why. All land-use plans must be professionally surveyed and officially registered.

CONSERVATION VERSUS FARMS

“If we reserve our land for trees and other plants, and wildlife: We will get firewood, rain, and keep water in the soil which is also needed for plants to feed cattle during the dry season. If you give that land to individuals to make farms, do you think you’ll get grass again?”

Noah Teveli,
Speaker for Burunge Wildlife Management Area

Step 5: Becoming “gazetted” and obtaining legal rights to wildlife

On the basis of the various plans the AA applies to the Director of Wildlife to legally gazette the WMA.

Then the AA must apply once again for formal user rights to the wildlife.

These legal recognitions are a key step toward actually benefiting from the wildlife sanctuary. Benefits can be wide-ranging, from fuelwood collection to conservation-based ventures (Table 1).

TABLE 1. OPPORTUNITIES AND WEAKNESSES, AS SEEN BY COMMUNITY MEMBERS AND OFFICIALS, TO BE DETAILED IN RESOURCE ZONE MANAGEMENT PLAN FOR LOIKISALE WMA

STRENGTHS/OPPORTUNITIES	Olkononoi (wildlife corridor)	Embarneti (permanent residences)	Ronjoo (temporary living dry season)
Dead fuel wood collection	✓		✓
Photo game viewing safaris	✓	✓	✓
Research	✓	✓	✓
Bee keeping	✓	✓	✓
Cattle grazing and wildlife conservation	✓	✓	✓
Water dams (cattle and wildlife)	✓		
Education and training	✓		
Nature trails (hiking)	✓		✓
Silkworm farming	✓		
Ranger posts	✓		✓
Orinjosoi (seed collection)	✓		✓
General uses			
Temporary camping			✓
Hotels/lodge			✓
Permanent tented camps			✓
River sand mining			✓
Fishing		✓	✓
Picnic sites		✓	✓
Fly camp			✓
Farming		✓	
Game drives		✓	
WEAKNESSES			
		Critical factors for the success of Loikisale WMA and RZMP	
1. Trespass across the WMA by lorries collecting murram		1. Entrepreneurship skills	
2. Low skills in community for natural resources management		2. Income generating projects	
3. Laxity in law enforcement		3. Investment in camps, hotels and lodges	
4. Poaching for food		4. Promotion and access to markets	
5. Low environmental conservation		5. Mini ranch development for better livestock	
		6. Construction of airstrip	
		7. Cultural training centre	
		8. Training of new leadership and retraining of existing leaders	
		9. Continuous performance monitoring and term evaluations	
		10. Infrastructure and resources	
		11. Water	
		12. Transport means	
		13. Office and working tools	

BENEFITS IN BURUNGE

The WMA is keeping the environment healthy, which attracts both wild animals and investors. This making of a WMA will provide an everlasting process of environmental care and of getting income. The WMA gets an investor for everyone. In the first year of Burunge, the WMA villages made 34 million shillings (Tanzanian). In the second year, we made 76 million.

*Noah Teveli,
Speaker for Burunge Wildlife Management Area*

Step 6: Creating a conservation-based venture (CBV)

Now the community may create a conservation-based venture, (also called "wildlife-based business", or "conservation enterprise," that is located inside or uses the resources of the WMA. Examples are nature trails, fishing camps, beehives, or simply the right to visit for photographic safaris or cultural tourism.

The CBV is often a partnership or "joint venture" between the community and a private investor. The investor provides capital, business expertise, training and jobs in return for permission to use WMA land.

Module 3 contains details on selecting, negotiating and sharing benefits from CBV.

Step 7: Continued monitoring

During the process of formation, a Board of Trustees plus a number of committees and officers of the AA will have been elected. These officials continue the work of monitoring the WMA, making sure plans are implemented and zones are respected, and keeping the community and wildlife secure. Such working committees include an executive committee, finance, planning, environmental, and security committees. Checks and balances are put in place with community members and local authorities so that management remains transparent.

Game scouts from the community, usually trained and paid by the investors are in charge of security and report poachers or other violators of the law (Box 1).

NEW VALUES

"Poaching used to be a serious problem in Enduimet. But since we have the WMA, it has gone down by 20 to 30 percent. Formerly, if poachers were seen, nobody bothered to do anything. Now, many villagers, if they hear news about poachers, will apprehend them.

BOX 1. THE VITAL ROLE OF GAME SCOUTS

Game scouts play a key role in WMAs and nature-based businesses.

- They protect the communities' lands and wildlife against poaching, tree-cutting, grazing or building in non-designated areas, and encroachment from other villages.
- They help the village enforce the zones its members have agreed on. They protect against/ report human-wildlife conflicts.
- They provide security to villagers
- They help maintain in top shape the resources on which the community and the community's businesses depend.
- Experts suggest that the game scout team works best when scouts:
 - See themselves as part of the business – the security branch.
 - Are well trained in handling conflicts; emergency rescue; data collection, and use of Geographical Positioning System (computerized mapping) equipment, with regular update training
 - Are equipped with radio handsets or cell phones, and GPS handsets.
 - Are supervised and have a base.
 - Report to the Village Game Ranger or other officials.
 - If part of a CBV, are employed and paid by the investor, from earnings of the business.

Things to watch out for include possible conflicts with community members, since game scouts come from the community and may need to take action against friends or family.

"What can happen is, say the community gets the first cheque in January and all the money is spent by May. Human beings forget quickly. In June it's easy to think, 'We aren't getting anything out of this. We might as well let the cows graze where they want.' It's the game scouts' job to drive the cows out of the no-grazing zones, and remind people of the agreement."

*Ben Mwangela,
Manager, Enterprise Services,
AWF, Kenya*

There are cases of trophies being collected by villagers and brought to the office to be taken away by the Wildlife Division. This makes me think that people are now more friendly to conservation than before.”

*Joseph Lendiy,
Honourary Secretary, Enduimet WMA*

BURUNGE WILDLIFE MANAGEMENT AREA

Burunge was named one of the original WMA pilot areas.

The area consists of nine villages, about 45,000 residents and a critical corridor for thousands of wild animals traveling between Lake Manyara and Tarangire National Parks.

Not everyone was happy about the idea of creating a WMA (see Module 5 on Conflict). African Wildlife Foundation (AWF), the facilitation NGO, began with education, engaging key members of the nine villages and conducting village-level seminars on the benefits of conserving wildlife and promoting their region as a tourism destination.

After scores of meetings and a couple of years of following the bureaucratic requirements, Burunge WMA was officially gazetted and awarded user rights for wildlife.

The villages agreed to shift settlements, and livestock away from key migration areas to minimize human-wildlife conflict. They created other zones for year-round grazing, and dry-season grazing.

Today the Burunge WMA nets about \$230,000 a year from two safari lodges, the Maramboi Tented Lodge and Lake Burunge Tented Lodge. The area was already benefiting, but fees have increased. More lodges are under construction as well. The funding supports numerous community development projects including health services and the construction of three schools.

In addition, residents have found work in these conservation-based businesses. The WMA also employs more than 40 village game scouts who have received formal vocational training. Game scouts coordinate anti-poaching and wildlife monitoring patrols, and contribute to the region's security.

Conflicts continue, however, and two villages have opted out of the WMA, claiming they had not agreed to it. Discussions are ongoing.

MWADA WOMEN'S GROUP, BURUNGE

The Mwada Women's Group, specializing in baskets and other woven goods, runs a market banda inside Burunge WMA. Visitors to the WMA become the group's customers, supplementing orders from hotels and other businesses, and trade fairs.

Before the formation of the women's group, some of the women had spent their days in difficult and poorly paid farm labour.

While some of the women had been making baskets for years, training organized by the African Wildlife Foundation helped them upgrade skills and designs. A basket might have fetched TZS 1,000 before; today women can earn TZS 10,000 or more.

“The baskets are so beautiful, some customers even bargain UP,” says Josephine Simons, the group's facilitator from AWF. “I heard a woman say the other day: 10,000? That's not enough. I'll pay you 15,000!”

The group's 30 members act as a board, representing the women of Mwada village. A portion of the proceeds goes to collective savings, another part to the group, and the rest to individuals. Collective savings means the group can make loans to members for school fees or emergencies.

The opportunity to earn cash means a lot to local households. “When one woman's husband died, the in-laws grabbed her land. She remained with only a hut and her five children. But fortunately she had savings from her basket sales. She leased four acres to plant maize. After cultivating for a season, and continuing to make baskets, she was able to buy her own land – five acres in Mwada.”

The group is now forming a pottery business as well.

Key points to remember

1 The process for creating a WMA is long, bureaucratic and arduous. Estimates for the cost of establishment range from \$100,000 to over \$250,000 – clearly an impossibility for local villages without considerable outside support.

Recommendation: Revamp and streamline the process. The process for creating a Village Forest Reserve might serve as a model.

2 Government laws, policies and circulars contradict each other, creating confusion over rights, responsibilities, and benefits. They change in ways that seem either arbitrary or counter to the spirit of community conservation.

Recommendation: Return to the spirit of the 1998 Wildlife Policy giving control over wildlife resources and resulting benefits to the community. If capacity-building is called for to ensure transparency and accuracy in income-distribution, then provide such capacity-building.

3 Hunting blocks now take precedence over non-consumptive utilization, even within WMAs. Hunting constrains photographic safaris and other CBVs. Hunting may be more appropriate in more remote parks with fewer potential non-consumptive tourism clients. It is less so in highly popular areas, such as Tanzania's northern circuit, where income from photo safaris can outpace that from hunting because of sheer numbers.

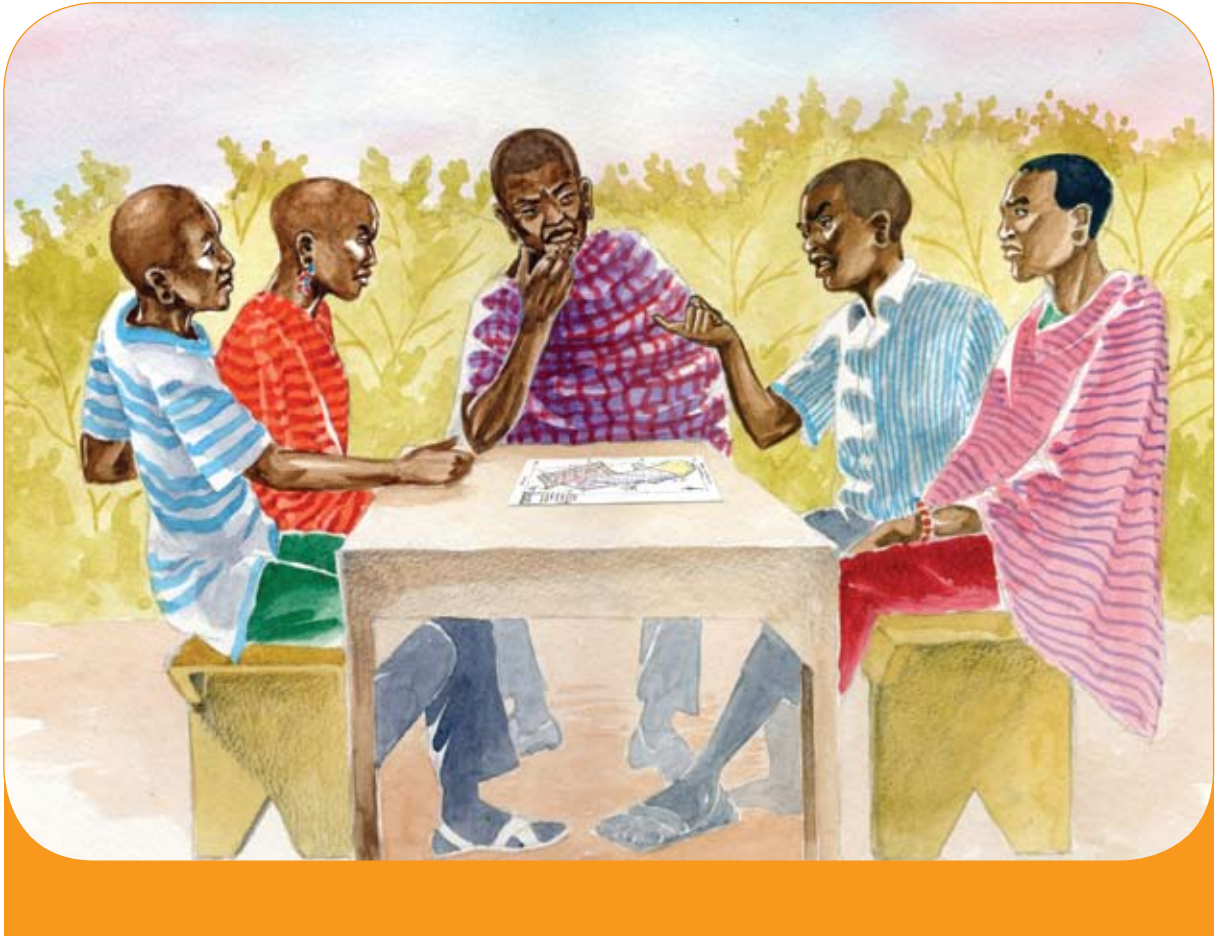
Recommendation: When hunting-block leases come up for renewal, allow WMA communities to review them and decide whether to renew or not. Devolve control over benefits from resident and tourist hunting to the community level. Encourage transparent public auctions for hunting concessions, so that the community obtains the best possible price.

Key points to remember

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Conflict in community: managing conflicts in areas with livestock, farming and wildlife



A TALE OF TWO VILLAGES

In 2006, a farmer from Narakauwo in Simanjiro District began planting crops and building houses on his designated 60-acre plot. Soon a farmer from the neighbouring village, Loiborsiret, decided to develop his own property. But he quickly discovered that part of it was already developed by the man from Narakauwo.

The two farmers talked. Each produced an ownership certificate awarded by village leaders. Both villages had been officially mapped, demarcated and registered in 1978.

Not content to give up his claim, the Loiborsiret farmer started clearing land inside the contested area. Soon family members, friends, and village leaders of both sides joined the debate, which evolved into a village-level boundary dispute.

The leaders of Loiborsiret convened a meeting and decided that, based on the registered map, their farmer owned the land in question. Then they approached Narakauwo leaders, and held a joint meeting open to all residents.

Fact-finding

There followed a series of discussions involving village committees from both sides as well as elders, traditional leaders and representatives from an NGO working in the area.

Much of the discussion focused on fact-finding:

- What was the loss or damage?
- What is the root cause of the conflict?
- What was the history?
- Who has the right to that land, since both held certificates?
- Which village does the land belong to, based on which village boundary map?

The maps were consulted, but each side accused the other of not being able to read them properly.

Inviting third parties

Eventually the villagers admitted that the existing maps were not going to help. They invited a third party – the Simanjiro District Council – which sent experts who promised to be neutral.

After examining the village maps and using the GPS



Two farmers argue over land boundary



Conflict parties consult maps in presence of third party

(Global Positioning System) – a sophisticated, computerized way to measure exact locations – the expert team concluded that the Narakauwo authorities had inadvertently extended the map boundary of Narakauwo into Loiborsiret.

Loiborsiret village therefore won the disputed land. As part of the agreement, the two villages agreed to:

- revoke the two original land certificates and issue new certificates of ownership;
- reassign the Narakauwo farmer who first developed the land to become a member of Loiborsiret village;
- request him to surrender half of his original land to the second farmer (though he was compensated with acreage elsewhere); and
- erect survey beacons to mark the exact boundaries to avoid future conflicts.

Lessons learned

- Resolving the conflict depended on cooperative fact-finding. Stakeholders made their decisions based on these facts.
- It can be useful to involve neutral third parties, from within or outside the community. They can help investigate the case as well as facilitate calm discussion.
- A principal objective was to maintain all existing relationships, so the villages aimed for a collaborative “win-win” solution that all parties could accept, rather than just trying to prove the other party wrong.
- Trust and truth-telling were fundamental in determining the authentic landowner without damaging relationships.

WHY THIS MODULE?

Try as we might, none of us can escape conflict. Whether over boundaries, or between people and wildlife; within or between families; among villages; between businesses or government units – even within one individual – conflict is inevitable.

Although it may be uncomfortable, conflict can ultimately be helpful. A well managed conflict where all parties are interested in resolution can:

- help people understand each other’s needs and desires;
- mend or enhance relationships through understanding and healthy, sometimes structured, communication;
- push people to devise options they might not have otherwise considered; and
- result in solutions where all parties benefit – known as a “win-win” solution.

Most disputes involving people, livestock and wildlife stem from scarcity of resources – a real and difficult challenge. But tensions often intensify because people hold different attitudes and values, and fail to understand each other’s views. Most conflicts have deeper causes than the obvious ones, and are complicated by emotional needs, fears and desires as well as material needs and wants (Box 1).

In addition, rumours or lack of communication can fuel conflict and damage even close relationships.

This module introduces ...

- Common approaches to conflict
- Major institutional systems available to help communities solve difficult problems

BOX 1. CAUSES OF CONFLICT IN THE PROJECT AREA

In rural villages in northern Tanzania near Tarangire National Park, human population growth and immigration of people from other districts has increased land hunger and conversion from rangeland to farmland. Conflicts are emerging over land, water, and other resources, between wildlife, herders and farmers. These are aggravated by environmental degradation and loss of land productivity, blocking of major wildlife migratory routes and calving areas, and the increased droughts and floods associated with climate change.

Underlying the conflicts

- 1. Expanding farms and settlements.** Both subsistence and commercial farms as well as trade centres are moving into areas that traditionally saw only pastoralism and wildlife. With these changes come:
 - a high rate of forest and bush clearing, both for farms and for charcoal;
 - bush fires;
 - illegal hunting, both subsistence and commercial;
 - reduction and fragmentation of rangeland for both livestock and wildlife habitat; and
 - loss of permanent water sources, soil erosion, and other environmental degradation.
 - 2. Crop raids and predation by wildlife.** Some 70 percent of Tarangire's wildlife moves outside the park boundaries during wet seasons. Herbivores raid growing crops, and predators take cattle and shoats.
 - 3. Conflicting policies and legislation on land resources.** For instance, policy allowing Wildlife Management Areas envisions communities to be paid directly by businesses using their land. But a government circular in 2007 requested that payment be made to the central government, which will give back a portion to communities. In addition, while WMAs are intended to allow communities to manage their own natural resources, as of early 2009, hunting concessions authorized by the central government were largely allowed to supercede other interests that communities might have, such as photographic safaris.
 - 4. Lack of transparency and equity.** Lack of clarity over income, revenue, and decision-making regarding benefits from natural resources breeds conflicts between investors, government, and communities, and between community leaders and members. In addition, those who benefit from wildlife and other natural resources are often not those who bear the cost of human/wildlife conflicts.
- Basic steps to coming to a win-win solution, whether through direct negotiation, mediation or other method. These include how to analyze conflicts, negotiate, expand the possibilities, solidify an agreement, and follow up.

COMMON APPROACHES TO CONFLICT MANAGEMENT

Everyone has a preferred approach or "style" of dealing with conflict. This style may seem immutable. But individuals and communities can choose which approach they use, and some are more likely to produce durable resolutions than others.

Below is a brief description of the five basic approaches to conflict management, illustrated by a story.

The Five Basic Approaches

Avoidance is avoiding the issues and probably the people involved in the conflict. Parties typically use avoidance when a conflict creates discomfort or seems

unimportant. It may work, at least for awhile, in minor conflicts. But avoidance can harm relationships as people withdraw from each other and possibly form "camps" around their friends. It can also lead to escalation as the conflict's causes remain unaddressed (Table 1).

EXAMPLE: Let's say a man buys a cow from his neighbor. Within a week the cow gets sick. The buyer hopes it will just recover. He suspects, though, that it was sick when he bought it. He does not discuss this with the seller, and stays away from places where they are likely to meet.

Accommodation can be considered "giving in" for the sake of (temporary) peace. It is also known as lose/win ("I lose, you win"). Sacrificing our own needs for those of others is often lauded. But in the long-run, if the issue is important, resentment is likely to build up, and relationships suffer.

Introduction

The buyer's friends and family tell him to forget about it and just treat the cow, since the seller would be offended by any accusation of selling unhealthy livestock. Then the cow dies

Competition or aggression sees individuals put themselves first and aim for a "win/lose" outcome. A competitive approach can quickly become a power struggle, going far beyond the original conflict. Conflict parties may resort to threats or violence to impose their will. The competitive style does not foster healthy relationships.

Enraged by the loss of the cow and feeling humiliated while doing nothing, the buyer steals a calf from the seller during the night.

The seller then threatens to burn the buyer's house down.

When they encounter each other at the market, they accuse each other of having unhealthy herds, and shout out a string of past grievances. They start to fight but are separated by friends.

Compromise, where each party "wins a little, loses a little" is often considered a fair way to resolve a conflict. Each gets part of what they want, but they also lose part. Compromises can often bring about a quick short-term solution. But over the longer term, people can become unhappy with the result as they dwell on what they lost.

Pressed by friends and family, the two finally sit down to discuss the issue.

At first each insists on a win/lose solution.

The buyer: "I'll give you back the calf when you repay me what I paid for the cow that died."

The seller: "Give me my calf back right away, and give me two sacks of corn for the trouble you've caused."

After a couple of hours, with prompting from friends, they consider a compromise:

The buyer will return the calf. The seller will sell him another cow, inspected by a veterinarian, at a below-market price.

Neither party is completely happy, but each feels they have "won" something.

Collaboration, or problem-solving, involves:

- investigating the deeper sources of conflict which may often lie beyond the conflicting parties;

- enlarging the pool of possible solutions as more information comes to light; and
- working with everyone concerned to come up with long-term, win-win solutions that also enhance working relationships.

Collaboration, or joint problem-solving, is often the best approach to both resolving a conflict and maintaining relationships in a community.

Collaboration takes time, though, and requires all parties to be dedicated to the process. The process is often facilitated by an outside party or mediator, whether from the government, an NGO, or another community.

Before they seal the deal, the two meet with a mediator from a local NGO. They all decide to get some more information and start by consulting a veterinarian about whether the cow could have been sick when sold. The incubation period indicates that the cow was probably not ill at the time of sale. But the seller eventually admits that this young cow, like others recently, had not nursed well and had always been a little underweight; the veterinarian concludes that this could have made it more susceptible to illness. Others in the community note that more cattle are falling ill with various diseases. In other words, this may be a community-wide issue. The mediators consult the District veterinary about preventive care for all the community's cattle. The District agrees to provide dipping and vaccination services in a more timely manner, as well as information on how community members might improve degraded pastureland.

In the process of fact-finding, discovering deeper causes of the conflict, and coming up with an option that helps the whole community, the buyer and seller have also restored their friendship.

They now agree that:

- both will take advantage of improved veterinary services;
- the buyer will return the calf; and
- the seller will give him the next healthy calf that is born, in exchange for just a sack of maize.

Both say their agreement is fair and appear vastly relieved. They invite other friends and neighbors to celebrate.

The agreement is recorded and witnessed by the mediators, the District Office, and the community.

TABLE 1. ADVANTAGES AND DISADVANTAGES OF CONFLICT APPROACHES

Strategy	Advantages	Disadvantages/Drawbacks
Collaboration	Approaching the conflict as a problem to solve together leads to creative solutions that will satisfy both parties' concerns, generating 'win-win' solution.	<ul style="list-style-type: none"> • It takes time and energy • It requires the good faith of all parties • Some partners may take advantage of the others' trust and openness
Compromise	Winning something while losing a little is a common strategy. By compromising, each party can satisfy at least some of their interests.	<ul style="list-style-type: none"> • Partners can lose sight of important values and long-term objectives • May work best in the short-term but resentment may build in the long-term • May not work if initial demands are too great
Competition	One party will at least temporarily achieve their desires and feel like the "winner" by exerting power or force. This produces a "win/lose" situation.	<ul style="list-style-type: none"> • The conflict could escalate and any losers may try to retaliate • Equity may suffer
Accommodation	Appease others by downplaying conflict, attempting to protect the relationship. Commonly becomes "lose/win."	<ul style="list-style-type: none"> • The ideas and concerns of one party may not receive sufficient attention • One party may lose credibility and future influence
Avoidance	Parties avoid conflict by withdrawing, sidestepping, or postponing the outcome- i.e. "lose/lose" or "no winners/no losers" situation.	<ul style="list-style-type: none"> • Important decisions may be made by default • Postponing may make matters worse

HELP IS AVAILABLE: CUSTOMARY, NATIONAL, AND COLLABORATIVE SYSTEMS OF CONFLICT MANAGEMENT

Three main systems are available to help individuals and communities manage conflict. Each has strengths and limitations (Table 2).

Customary systems for managing conflict

Tanzanian villages retain traditional legal systems where local leaders and respected elders administer *customary laws*. For example, Village Land Adjudication Committees use customary law to clarify land rights. The success of this legal system in managing conflicts over natural resources depends on the buy-in of disputants as well as enforcement capacities of traditional authorities.

Some customary systems use *mediation* – where a third party such as a council of elders facilitates discussion and decision-making between the opponents (Box 2). Or they may use *arbitration* – where a third party, agreed to by disputants, hears each point of view and makes a binding decision.

BOX 2. FARMER-HERDER CONFLICT IN WEST AFRICA

Conflict over land use is a frequent feature of the Sahel as well as East Africa. In a recent study in four villages in Niger, community members said that damage to crops and unauthorized grazing of crop residues after harvest account for about 80 percent of reported conflicts between farmers and herders. Conflicts also stem from access to water points, animal theft, and expansion of crop fields into traditional livestock corridors.

Despite the fact that underlying causes are quite complex, the majority of conflicts are resolved, most commonly with the help of mediation by elders and chiefs. This works especially well in villages where all social groups hold high respect for these authorities.

The research also found that strong links and communication between farmers and herders help people prevent and manage conflict. Findings support the idea that conflicts between different livelihood strategies can be managed effectively by local communities.

Turner, M. et al., 2007

TABLE 2. ADVANTAGES AND DISADVANTAGES OF DISPUTE-RESOLUTION SYSTEM

System	Strengths	Limitations
Customary systems	<ul style="list-style-type: none"> • Encourage community participation and respect local values and customs. • Base decision-making on collaboration and foster local reconciliation. • Support community empowerment. • Engage local leaders as mediators, negotiators or arbitrators. • Provide a sense of local ownership of both the process and its outcomes. 	<ul style="list-style-type: none"> • Have been supplanted by courts and administrative laws. • May exclude people on the basis of gender, class, caste and other factors. • May allow local leaders to use their authority to pursue their own self-interest, or that of their affiliated social groups or clients. • May not write down oral decisions and processes for future reference.
National legal system	<ul style="list-style-type: none"> • Strengthens the rule of state law, empowers civil society and fosters accountability. • Involves judicial and technical specialists in decision-making. • Has the potential to base decisions on the merits of the case, with all parties sharing equity before the law. 	<ul style="list-style-type: none"> • Often excludes the poor, women, marginalized groups and remote communities because of cost, distance, language barriers, political obstacles, illiteracy and discrimination. • Allows only limited participation in decision-making for conflict parties.
Alternative conflict management	<ul style="list-style-type: none"> • Overcomes obstacles to participatory conflict management inherent in legislative, administrative, judicial and customary approaches. • Builds on shared interests. • Develops points of agreement and ownership of the solution process. • Emphasizes community capacity building that prepares local people to become more effective facilitators, communicators, planners and managers of conflict. 	<ul style="list-style-type: none"> • Fails to address structural inequalities, and may perpetuate or exacerbate power imbalances. • Risks difficulties in getting all stakeholders to the bargaining table. • Produces decisions that may not be legally binding. • May use methods developed in other contexts and cultures without adapting them to local contexts.

National legal systems

A national legal system addresses conflict through *ad-judication* in courts of law: opponents argue their case before judges or other officials. Disputants often hire lawyers. The authority hears arguments and reviews evidence before deciding in favour of one party – producing a clear winner and loser.

The national legal system extends from local village councils to ward tribunals and courts at the district, regional and national levels (URT, 1997). Some national systems also integrate local customary law or other community values (FAO, 2005).

Legal systems also sometimes call for binding arbitration, where a third party makes the final decision.

Collaborative conflict management, also called “Alternative Conflict Management (ACM)”

Collaborative conflict management – also called “problem-solving” or “alternative conflict management” – is likely to involve mediators from an NGO, CBO, or government authority.

ACM promotes joint decision-making among disputants to create “win-win” solutions. The mediator facilitates discussions, helps gather information, promotes conciliation, helps all listen carefully to each other, and helps foster voluntary agreements. The stakeholders, however, make their own decisions.

ACM works best with disputants who are fairly equal in strength, such as a farmer and a livestock holder arguing over land. If, say, a District Officer claims that a farmer has violated the law, the case is more likely to be taken to the national legal system.



Meeting of villagers on conflict

EFFECTIVE CONFLICT MANAGEMENT

Step 1: Prepare for conflict management

A recommended first step is to select a village conflict management committee. Villagers might develop guidelines for desired qualities of committee members such as a reputation for fairness, honesty, and good listening skills and select candidates by village assembly.

The selection process should involve elders, traditional leaders, men, women and young people, and members of traditional conflict-resolution institutions.

Deciding how to proceed

When nine villages were considering whether to establish a Wildlife Management Area in Burunge, northern Tanzania, conflicts erupted, some turning violent. Some villagers wanted the WMA, others did not; many did not fully understand the implications.

The first step toward resolving conflicts within villages was taken by traditional leaders and elders, who called meetings for grievance-airing and fact-finding – thus using traditional means and setting the stage for a possible collaborative solution. For a more extensive narrative of how the Burunge villages dealt with conflicts regarding the WMA, see Appendix 1.

Participants should consider the five major approaches to conflict and whether they will aim for a collaborative solution or another type of management (for instance, a competitive solution through adjudication).

Step 2: Analyze the conflict

In Burunge, the elders and conflict committee invited an NGO to help mediate.

The NGO helped participants gather information to clarify the conflict, how it began and developed, who was involved, how it affected people, and what deeper issues it might reflect.

The analysis step requires a lot of questions and listening (Box 3). Everyone's point of view should be carefully considered. In the Burunge case, it became clear that:

1. a lot of the resistance to the WMA was based on misinformation – stakeholders not understanding how a WMA would affect them; and
2. residents had many pressing concerns, some of which could in fact be addressed by the process of creating of a WMA.

In addition to analyzing the issue's history and current status, analyzing the interests, needs, fears and goals of stakeholders is crucial (Table 3).

TABLE 3. STAKEHOLDER ANALYSIS: INITIAL INTERESTS, NEEDS, DESIRES AND FEARS OF SEVEN MAJOR STAKEHOLDERS IN THE BURUNGE WILDLIFE MANAGEMENT AREA (WMA)

Conflict Stakeholders	Interest	Needs	Desires and Fears
Individual Farmers	<ul style="list-style-type: none"> Land for crops for cash and food Prevent land grabbing 	<ul style="list-style-type: none"> Money to buy more land and inputs Potential markets Land for cultivation 	<p>Fear:</p> <ul style="list-style-type: none"> Crop loss due to wildlife and livestock damage <p>Desire:</p> <ul style="list-style-type: none"> To be compensated for crop losses To increase land for cultivation
Livestock keepers	<ul style="list-style-type: none"> Livestock for livelihood 	<ul style="list-style-type: none"> Livestock infrastructure Money to buy livestock drugs and inputs Grazing land during drought periods in WMA 	<p>Fear:</p> <ul style="list-style-type: none"> Wildlife disease transmission and predation on livestock Environmental destruction as a result of tree felling for cultivation <p>Desire:</p> <ul style="list-style-type: none"> More land for livestock grazing
Individual villages	<ul style="list-style-type: none"> Protect wildlife through WMA Conservation business ventures (CBVs) 	<ul style="list-style-type: none"> Revenue from wildlife Revenue from WMA Need for land-use planning Village resource assessment 	<p>Fear:</p> <ul style="list-style-type: none"> Unequal benefit sharing with other villages Harm from existing tourism businesses or individuals' interest Extension of park into village land <p>Desire:</p> <ul style="list-style-type: none"> To benefit from WMA Hunting and tourist investors will contribute to villages development projects/activities
Collective villages	<ul style="list-style-type: none"> Protect wildlife through WMAs Ventures and revenue 	<ul style="list-style-type: none"> Need revenue from WMA Establishment of women IGAs Create employment Joint land-use planning Joint villages resource assessment 	<p>Fears:</p> <ul style="list-style-type: none"> Benefit-sharing will be unfair among the partner villages Hunting companies might extend beyond the hunting blocks into WMA <p>Desires:</p> <ul style="list-style-type: none"> Economic benefits from WMA More participation in conservation ventures
Tourism investors (tented lodges and camp, photographic safaris)	<ul style="list-style-type: none"> Conduct tourism business ventures 	<ul style="list-style-type: none"> Protect wildlife To increase revenue from tourism investments 	<p>Fear:</p> <ul style="list-style-type: none"> Hunting companies will chase away or deplete wildlife <p>Desire:</p> <ul style="list-style-type: none"> Prefer more WMAs in the villages as opposed to more wildlife hunting
Hunting companies	<ul style="list-style-type: none"> Hunting of wildlife 	<ul style="list-style-type: none"> Need money from hunting activities 	<p>Fear:</p> <ul style="list-style-type: none"> Having villagers monitor hunting activities <p>Desire:</p> <ul style="list-style-type: none"> Communities will conserve wildlife and increase hunting stock
Wildlife conservators/ park authorities	<ul style="list-style-type: none"> Reduced fragmentation of wildlife grazing areas Protect wildlife resources 	<ul style="list-style-type: none"> Establishment of WMAs in the villages 	<p>Fear:</p> <ul style="list-style-type: none"> Blocking wildlife corridors, poaching or illegal hunting <p>Desire:</p> <ul style="list-style-type: none"> More land for wildlife grazing, dispersal and calving areas Livestock to co-exist with livestock

BOX 3. HELPFUL QUESTIONS FOR CONFLICT ANALYSIS**Issues (Root cause and issue analysis)**

- What is the conflict about?
- How did the conflict arise?
- What might be the root causes? Might they be beyond the control of the disputants?
- Which issues might be negotiable?
- What values or interests are challenged?

Groups involved (Stakeholder analysis)

- Who is involved?
- What groups do they represent?
- What are their interests, goals, positions and needs?
- What are they afraid of?
- How are they organized, and what are their power bases?
- Are the groups capable of or amenable to working together?
- What are the historical relationships among the groups?

The way forward:

- What are past experiences with similar cases?
- Would a neutral, outside mediator be helpful?
- Are there external barriers to resolution?
- Are there other resources that could be helpful in fact-finding or management?

Step 3: Pre-negotiation

Since Burunge involved nine villages, many groups had roles to play in negotiations (Table 4). Negotiation steps included:

Initiation. Stakeholders, committees and leaders met together to strengthen their intent to reach an agreement. Key groups and spokespeople were identified from both sides; they included village leaders, traditional leaders, elders, women and youths, the District Council, representatives from hunting companies, tourism investors, NGOs, and AWF.

Ground rules and agenda. The groups agreed on ground rules for communication, negotiation and decision-making. They set an agenda and proposed a timetable.

Organization. Stakeholders worked out logistics such as meeting times and location. The task force and

TIP: POSITIONS VS INTERESTS

Usually disputants get caught up in a "position." For instance, one villager might tell another "You must stop farming here, where I have cows." The other would say, "You must stop grazing here where I farm."

But a skilled mediator will help the two separate their "interests" from the "positions" – thus opening up a new set of possibilities.

In this example, interests would probably include producing or obtaining food and/or herding livestock. So new possibilities could be:

- Is there somewhere else to produce food? Is there somewhere else to herd?
- Is there some way to produce the same amount of food in less space, while keeping livestock out of the fields?
- Does it make sense to enhance another business and buy food instead?
- What about creating a feedlot, where more and healthier cows might be raised in less space?
- Separating interests from positions can lead to new, creative solutions that had not before been considered.

village leaders recorded minutes of meetings. This information was distributed to inform all stakeholders about progress and the objectives of the next meetings.

Joint fact-finding. The groups agreed on what information was relevant to the conflict and forwarded these to the negotiating committee. Through fact-finding efforts, for instance a study trip and trainings, all concerned learned more about what the WMA would mean, and experience of other communities with WMAs. People also learned more about the kinds of business opportunities the WMA could bring.

Step 4: Negotiation

Creating the Burunge WMA required many sets of negotiations, both within and between villages.

Negotiating aims at achieving a fair, lasting agreement in which everyone benefits. The mediators guide stakeholders in self-reflection and self-discovery to identify their own long-term interests and appreciate each others'.

TABLE 4. STAKEHOLDERS AND THEIR ROLES DURING CONFLICT MANAGEMENT AS APPLIED IN THE BURUNGE CONFLICT

No.	Stakeholder	Status	Roles
1.	District Council officials (E.g. DGO, DLO)	Mediator	<ul style="list-style-type: none"> • Trainer of communities on importance of establishing WMAs in their villages
2.	African Wildlife Foundation (AWF)	Mediator	<ul style="list-style-type: none"> • Facilitate trainings • Prepare training materials • Arrange travel for trainers • Community study visits
3.	Traditional leaders and elders	Conflict Party and Mediator	<ul style="list-style-type: none"> • Maintain and ensure peace in the villages • Main village advisors • Decision-makers • Mediator's role
4.	Villagers (farmers, livestock keepers, and business people)	Conflict party(s)	<ul style="list-style-type: none"> • Trainees to be trained on WMAs • Representatives form conflict committees, go for study tours • Implementers of agreed village plans
5.	District Commissioner	Mediator	<ul style="list-style-type: none"> • Involved in one of the mediation meeting when the conflict was at violence stage, so the main role is to ensure peace in the district and in the villages as well is maintained • Policy advocates on WMA's establishment
6.	The private sector investors	Conflict party/some as mediators	<ul style="list-style-type: none"> • Ensure participation of communities in conservation business ventures (management and running of business joint ventures) and benefit sharing • Contribute to village development projects

Identifying interests (as opposed to positions)

Interests include the needs and concerns that motivate each party. For instance, "We don't want a WMA in Burunge" was a position for some, but there were many interests beneath that position.

These included: "We want secure tenure over our land; we want to be able to continue to graze our cattle; we want to protect our land from encroachment; we want to be able to make income from our land ...".

Once they are made explicit, interests can often be satisfied in many ways, including ones that the disputants might not have thought of before.

Creating options. Successful conflict resolution requires parties and mediators to invent new options for satisfying the various interests. It helps to create a long list of possibilities; some of these might never have been considered before, but could turn out to be quite fruitful.

For instance, the nine villages in the Burunge WMA explored a variety of ways to share benefits, including giving everyone an equal share; giving more to those who contributed more land, or who had more wildlife on their land, relocating existing investors.

Evaluating and choosing options. In Burunge, the villages finally agreed that each would receive a rent payment depending on how much land it contributed; but all villages would share equally the proceeds from wildlife-based businesses in the WMA.

Within villages, residents agreed on clear zones where they would and would not allow farming or grazing, and those living within what became the WMA were allotted other land.

While creating a multitude of options, the parties do not judge any of them until they have finished listing all they can think of. The groups together determine which ideas are best for satisfying various interests. This helps stakeholders move from a list of options to realistic and manageable agreements.

Step 5: Creating an agreement

Negotiations ended when options were agreed by consensus.

Ratification. The Burunge mediators prepared a memorandum of understanding to ensure that agreements would be remembered and communicated clearly.

BOX 4. KEY QUESTIONS FOR EVALUATION, COMMITMENT AND IMPLEMENTATION

- How will the stakeholders ensure that the agreement will be acted on?
- Does the implementation of the agreement require the formal involvement of specialists or groups, such as administrators, leaders of resource user groups, and community political leaders?
- How will the parties manage any unexpected results from the agreement?
- What monitoring mechanisms will be established to ensure compliance with the agreement?
- What is the mediation team's role in monitoring? Are there local neutral or trusted monitors?
- How can parties define and identify the next steps e.g. activities and actions to be implemented, timeframe, persons responsible, resources required, and expected outputs (action planning).

Ratification and documentation helps participants to feel confident that everyone will carry out their part of the agreement. It helps for participants to discuss and agree on methods to ensure partners understand and honor their commitments.

Implementation. Once there is an agreement, the parties jointly develop an action plan; the plan includes

who does what, when, resources, and results expected. In the Burunge case, the series of agreements led directly to village registrations, land-use planning, and the creation of the WMA. The WMA in turn enabled the creation of several conservation-based businesses, which are now bringing in a considerable amount of income to the communities (see Case Study at the end of this Module, and Module 4 on WMAs).

In addition, the process helped villages learn how to perform joint planning, important when sharing an ecosystem.

Step 6: Monitoring, evaluation and exit of mediators

The conflict management team or other mediators develop a system to implement and monitor the agreement involving the stakeholders and/or a trusted local mediator (Box 4). The team may include strategies to build the communities' capacity to prevent or solve future problems.

This step is important because conflicts have a way of recurring. Especially in a complex conflict involving numerous stakeholders, "consensus" may be unclear, or people may feel pressured to agree with one side or another, or may have missed key meetings where they might have voiced dissent.

In fact, some of the above appears to have happened in the Burunge case, and as of this writing, two villages had decided to leave the WMA, claiming they had not agreed to it. Discussions are no doubt ongoing

Key points to remember

- 1** Conflict is as inescapable as breathing. But how it is managed can determine whether it escalates and turns destructive, or whether it becomes a process for improved communication and relationships among former disputants.
- 2** A collaborative, problem-solving, win-win solution is most desirable, but may be hard to attain if disputants have greatly different power or status, or if communication remains poor.
- 3** A mediator, from within or outside the community, can help disputants listen to each other and come up with possible resolutions that they might not have thought of on their own.
- 4** Customary systems of conflict resolution share much in common with modern approaches, including fact-finding, analysis of stakeholders' interests and needs, and concern for restoring relationships.
- 5** The more communication, the more participation, the more buy-in from those involved, the better. If people feel their interests are left out, a related conflict is likely to surface.
- 6** Community-level measures can go far to keep the peace. For instance, participatory land-use planning (see Module 2) can ensure that all stakeholders' needs are taken into account regarding natural resources.
- 7** Ambiguous or contradictory policy can exacerbate conflicts over land use. Clear policy that conveys secure rights to land and natural resources could significantly reduce conflicts between individuals, villages and businesses.

Key points to remember

APPENDIX 1 CASE STUDY: CONFLICT OVER ESTABLISHING BURUNGE WILDLIFE MANAGEMENT AREA

Context: Attempting to create a community-based conservation area

The Tanzania Wildlife Policy of 1998 promoted Wildlife Management Areas (WMAs) to encourage conservation and sustainable management of wildlife on community lands. In 2002 the Government of Tanzania approved regulations and guidelines for creating and managing WMAs.

WMAs allow local communities to manage, use, and benefit from the wildlife on their land. Communities can generate income and other benefits through both non-consumptive use of resources (i.e. sight-seeing and photographic tourism) and controlled consumptive uses (e.g. hunting tourism, hunting for subsistence, grazing, wood harvesting).

Burunge WMA lies in Tanzania's wildlife-rich northern tourism zone, between Tarangire National Park (TNP) and Lake Manyara National Park (LMNP). It overlaps with the primary wildlife corridor between the two national parks, and the lands of nine villages: Magara, Manyara, Maweni, Minjingu, Mwada, Ngolei, Olasiti, Sangaiwe, and Vilima Vitatu.

The Government of Tanzania designated Burunge as one of 16 Pilot WMAs throughout the country in 2002. But local residents initially so opposed the plan that widespread conflict erupted both within and between the nine communities involved.

Conflicts over who gives what ... and a lot of confusion

At the outset, villagers had been poorly informed about the benefits and costs of establishing and managing a WMA.

Many community members believed that a WMA would mean ceding village lands to Tarangire National Park. While a misconception, this view was understandable since WMAs were an untried concept at the time, and previous experience with conservation had indeed often meant displacement of communities by national parks.

Two types of conflicts erupted:

1) Conflicts within the villages

Conflicts grew between community members who understood the WMA concept and endorsed it, and those

who misunderstood and refused it. Opponents of the WMA blamed their leaders for "selling" village land without their permission.

In addition, many people raised concerns over management of livestock grazing areas and about the impact on families dwelling on land that would become part of the WMA.

2) Conflicts between the nine villages

These conflicts centered on how to share benefits, such as tourism income, that all hoped would flow from the creation of a WMA. Some of the villages already had agreements with tourism operators; they were reluctant to share their assets or income with other villages. In addition, villages had varying levels of wildlife. Those with more wanted a higher share of benefit in view of their resources and also greater damages suffered from wildlife.

Both types of conflicts escalated as rumors flew and more villagers became falsely convinced that the WMA would mean that the national parks would annex village land. Villagers turned against each other. One group even threatened to burn the homes of their village leaders.

Negotiations based on traditional conflict management and new information

The government and village leaders introduced a flexible mediation and negotiation process that evolved to help shape a peaceful resolution to the disputes.

The first step was to resolve conflicts within the villages. As the conflict turned violent, traditional leaders and elders initiated a series of local meetings. During these meetings, both factions acknowledged the importance of villagers' coming to a consensus one way or the other, and other stakeholders following their lead. The meetings succeeded in halting the violence.

In addition, an NGO organized, and the District Game Officer (DGO) facilitated, trainings for villagers on the advantages and disadvantages of establishing a WMA.

The mediator helped each village identify its major interests. For example, livestock keepers wanted an area within the WMA set aside for dry-season grazing. This was agreed. Some of the villagers living in what would become the WMA were able to "swap" their land for a parcel of similar size and value outside the wildlife corridor. Villages who could only contribute smaller land areas were allowed to share the communal benefits equally with the larger landholders.

Next came the challenge of resolving conflicts be-

tween villages, as each village sought to serve its own interests based on the amount of land and other resources it had to invest.

To get more information, each village elected a representative to join a study tour of two other WMAs which were further along, to observe other communities' experiences.

The trainings and study tours raised awareness and built trust. Some of the tour participants became facilitators who could draw on their visits to other WMA sites. The trainings also led to calmer meetings to discuss benefit sharing and related issues such as land rent.

Wide range of parties involved in the mediation and negotiation process

These included:

- Village representatives selected by the community
- District Commissioner District Executive Director and his team of experts
- Leaders from the Ministry of Natural Resources and Tourism
- Traditional leaders and elders
- Villagers who received training
- African Wildlife Foundation staff

Results: Agreements and WMA registration

- Eventually all villages agreed that each village that contributed land would receive a rent payment for its individual investment in the scheme. All the villages would share, however, income from private tour operators or businesses run by the villages. This revenue would go into the WMA common account.
- The agreement has reportedly reduced conflicts, threats and violence. Stakeholders can address conflicts through the Authorized Association (AA): with representatives from each village, the AA functions as a local mediator.
- The Burunge WMA successfully completed the registration process and granted full user rights to its Authorized Association: *JUHIBU: Jumuia ya Uhifadhi Burunge* (the Burunge Community Wildlife Management Organization) in 2006. The WMA is now fully functional.

Results: Business and conservation benefits

Since its registration, the Burunge WMA has achieved economic, conservation, and social development results, including:

- **New income from private tourism investment**
A private investor, Kibo Safaris Ltd, manages two tourism facilities in the WMA: Maramboi Tented Lodge and Lake Burunge Tented Lodge. At the close of the fiscal year in June 2008, JUHIBU and the WMA had earned an income of TZS 63,785,599 to be shared among the nine villages.
- **Women's Micro-Enterprise Development activities**
The increased number of tourists visiting and staying overnight in the WMA has created an accessible market for several women's handcrafts groups. The increased income reaches some of the region's most underserved residents. See Module 3.
- **Increased NRM capacity**
To date, more than 40 village game scouts have received formal training. These scouts coordinate anti-poaching and wildlife monitoring patrols, and also promote conservation outreach among the nine WMA villages. Poaching activities have decreased.

BUT ...

Clearly some area residents appreciate the results of the WMA. Yet as of this writing, two villages were withdrawing from the WMA, claiming that they had not agreed to join. Researchers have reported that many villagers say they were not adequately informed and the deal was largely one among leaders and investors. Other observers point to the difficulties of communicating with all the members of nine villages, and that the main issue is misunderstanding. Conflict management efforts are likely to be ongoing ...

APPENDIX 2 ACRONYMS

ACM	Alternative Conflict Management
CBVs	Conservation Business Ventures
CTIC	Conservation Technology Information Center
DGO	District Game Officer
DLO	District Land Officer
FAO	Food and Agriculture Organization of the United Nations
ETU	Education and Training Unit
ILRI	International Livestock Research Institute
LEAD	Livestock, Environment and Development
UDHR	Universal Declaration of Human Rights
URT	United Republic of Tanzania
WMAs	Wildlife Management Areas

APPENDIX 3 GLOSSARY

Conflict

Conflict is a relationship involving two or more parties who have, or perceive themselves to have, incompatible interests or goals (FAO, 2005).

Conflict analysis

Conflict analysis is the identification and comparison of the positions, values, aims, issues, interests and needs of conflict parties (FAO, 2005).

Conflict management

Conflict management is the practice of identifying and handling conflicts in a sensible, fair and efficient manner that prevents them from escalating out of control and becoming violent.

Conflict resolution

Conflict resolution deals with process-oriented activities that aim to address and resolve the deep-rooted and underlying causes of a conflict.

Consensus

Consensus decision-making requires that everyone agrees to a decision, and not just a majority, as occurs in majority-rule processes. In consensus-based processes, people work together to develop an agreement that is good enough (but not necessarily perfect) for everyone at the table to be willing to accept (FAO, 2005).

Interests

Interests are what a party in a dispute cares about or wants. They are the underlying desires and concerns that motivate people to take a position. While people's positions are what they say they want (such as "I want to build my house here"), their interests are the reasons why they take a particular position ("because I want a house close to my family"). Parties' interests are often compatible, and hence negotiable, even when their positions seem to be in complete opposition (FAO, 2005).

Mediation

Mediation is an extension or elaboration of the negotiation process that involves a third party. This third party works with the disputing parties to help them improve their communication and their analysis of the conflict situation, so that they can themselves identify

and choose an option for resolving the conflict that meets the interests or needs of all of the disputants. Unlike arbitration, in which the intermediary listens to the arguments of both sides and makes a decision for the disputants, a mediator helps the disputants to design their own solution.

Negotiation

"Negotiations are a form of decision-making by which two or more parties talk with one another in an effort to resolve their opposing interests" (D.G. Pruitt cited in FAO, 2005).

Stakeholders

Stakeholders are the people who will be affected by a conflict or the resolution of that conflict. They include the current disputants, and also people who are not currently involved in the conflict but who might become involved, because they are likely to be affected by the conflict or its outcome sometime in the future.

Win-lose (adversarial) approach

This is the approach to conflict taken by people who view the opponent as an adversary to be defeated. It assumes that in order for one party to win, the other must lose. This contrasts with the win-win approach to conflict, which assumes that if the disputants cooperate, a solution that provides victory for all sides can be found (Conflict Research Consortium, 1998).

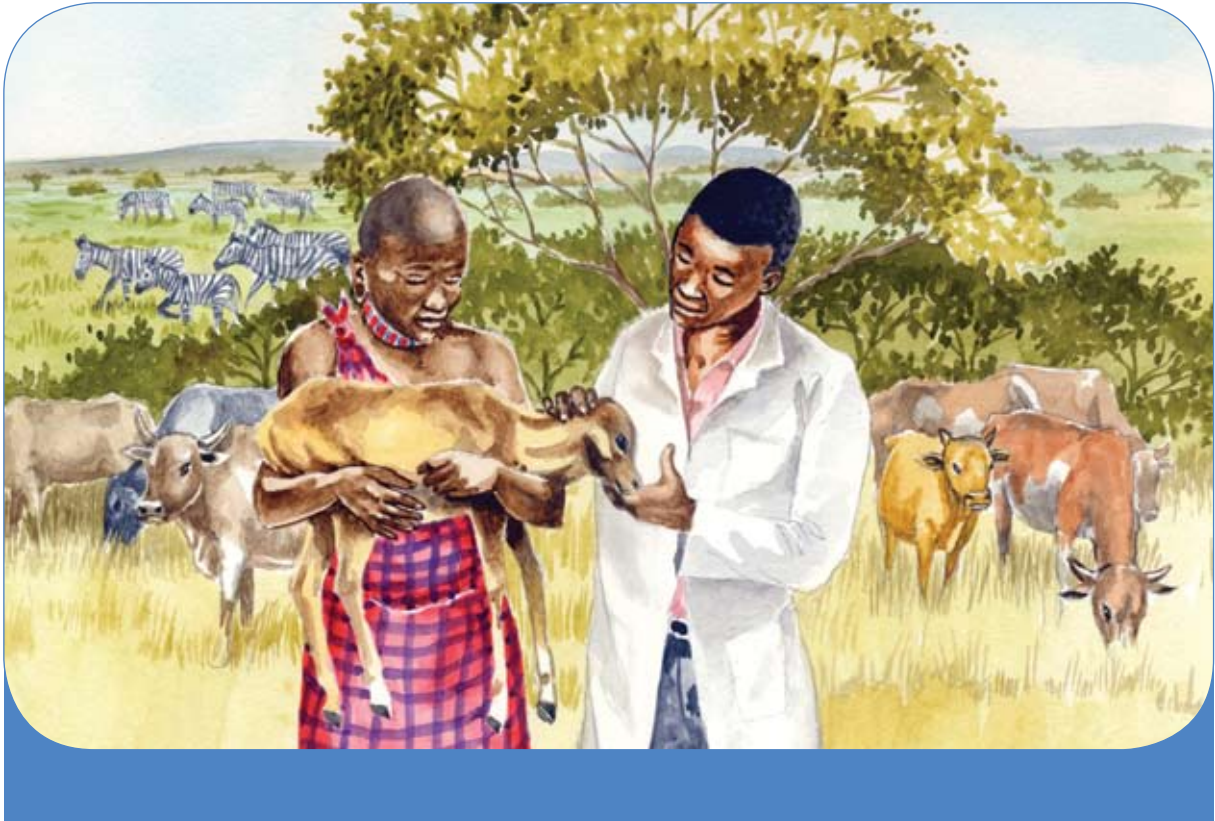
Win-win (cooperative or problem solving) approach

This is the approach to conflict taken by people who want to find a solution that satisfies all the disputants. In win-win bargaining, the disputing parties try to cooperate to solve a joint problem in a way that allows both parties to "win". This contrasts with the win-lose (adversarial) approach to conflicts, which assumes that all opponents are enemies and that in order for one party to win a dispute the other must lose (Conflict Research Consortium, 1998).

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Managing livestock diseases near wildlife sanctuaries in East Africa



For centuries pastoralists have managed both their herds and the rangeland through seasonal movement, reserving areas of pasture for drought seasons, protecting certain types of trees and avoiding areas known for disease. This traditional land-use planning helped both livestock and wildlife thrive on the Maasai Steppe, which still has the greatest concentration of large wild mammals in the world.

But in recent decades both government policy and human population growth have constricted pastoralists' freedom of movement, squeezing pastoralist herds into smaller and smaller spaces.

Restricting movement endangers pastoralist livelihoods, leads to conflict and also creates a growing "interface" where wildlife and livestock meet. Livestock and wildlife then share pasture, water, salts and parasites and diseases.

Whether or not they come from wildlife – some do and some do not – livestock diseases can devastate herds and family incomes. Many pastoralists lose a sizeable portion of their livestock and spend a sizeable portion of their income combating disease each year. Some microbes even jump to humans.

For a sense of scale: a recent study in Isinya District, Kenya, found that 60 percent of calves and 50 percent of adult cattle were estimated to have been ill during one year, 2003–04 (Bedelian *et al.*, 2006).

Helping pastoralists keep herds healthy can increase badly needed income as well as help maintain human health.

WHY THIS MODULE?

Disease is more than a matter of microbes. Disease rates rise or fall depending on a large number of factors. At the moment, both community members and scientists have observed livestock disease on the rise in pastoral areas.



Livestock-wildlife resource sharing

Diseases new to particular regions are emerging. Previously controlled ones are coming back. Others are expanding their range.

Both planners and community members need to be aware of trends influencing livestock disease, since diseases affect community well-being and income. And most can be controlled or even eliminated by human action.

Trends affecting the rise in livestock disease include many of those discussed in this Toolkit (see especially Modules 1 and 2). In brief, they are:

- **Climate change.** Temperatures in East Africa, as in most of the world, are slowly rising. In addition, the climate crisis is producing more extreme weather more frequent droughts but also more floods when it rains. When animals are weakened by lack of food or water, they are more vulnerable to disease. And, in a vicious circle, disease-weakened animals are less able to withstand drought.
- **Disease-bearing insects on the rise.** As temperatures rise and moisture levels change, "vectors" – insects that carry disease – are expanding their territory, infecting animal populations in new places.
- **Land squeeze.** Turning rangeland into farmland is squeezing pastoralists into smaller spaces, denying them the traditional ability to move with the rains and fresh pasture, and putting them into more contact with wildlife.

CONSIDER THE CATTLE

"People worry that if we separate wild and domestic animals, it will be like another park coming in and they don't want that. It's more helpful to emphasize sharing the land. But sometimes animals need to be separated for a short time. For instance, keeping cattle out of wildebeest birthing areas until wildebeest calves are three months old will prevent livestock from getting sick from Malignant Catarrhal Fever. But to do that, there must be somewhere else to take the cattle, that's reserved for them. That's very important to remember when planning land use."

*Moses Nesele
Veterinarian and community planner*

The good news is that some diseases can be prevented or controlled by wise land-use planning at the community level (see Module 2). Key to effective planning is giving careful consideration to pastoralist needs and knowledge, so their herds have adequate space free of disease and emergency pasture.

In addition, the burden on pastoralist communities from wildlife-related disease can be compensated for by creating new opportunities, such as nature-based businesses. Countries in East Africa allow communities to benefit from tourism, bee-keeping and other enterprises based on the presence of wildlife and healthy forest and bushland (see Module 3).

What follows is not a substitute for veterinary guidance, but a brief guide to important facts and recent developments in common livestock diseases in pastoral lands near protected areas.



Veterinary officer administering medication to animal

COMMON LIVESTOCK DISEASES AND THEIR TRENDS IN PASTORAL AREAS

1. Anthrax

(Maa: Engeeya Nairowa; Swahili: Kimeta)

What you need to know

Anthrax infects livestock as well as buffalo, zebra and other grass-eating animals. Anthrax bacteria can live a long time in the soil. Animals are most likely to pick up anthrax at the beginning of the rainy season, when the grass they are eating is short.

With land-use changes, as livestock and wildlife are pushed into more confined spaces, the incidence of anthrax is rising.

People can get it too, by handling or eating meat from infected animals.

Look for ...

- Sudden death of apparently healthy livestock
- Swellings in the throat, chest, abdomen and/or legs of animals that become sick but don't die.

Be careful

If people or predators open the carcass of an animal that died from anthrax, they can trigger an epidemic as spores spread through the air and the ground. The

patch of soil where body fluids leaked can harbour infection for up to 60 years!

If you think an animal has died from anthrax, guard the carcass or use thorn bushes or stones to keep predators from tearing the carcass open.

Burn the carcass after sprinkling it thoroughly with kerosene or petrol. Or bury it two metres deep and cover it with ashes or lime.

Prevention and control

Vaccination works for nine to twelve months and is best delivered as a community or government effort to protect all cattle.

Antibiotics can be effective if treatment starts early, though prevention is preferable and less costly.

2. Rift Valley Fever

(Swahili: Ugonjwa wa Bonde la Ufa)

What you need to know

Many people think Rift Valley Fever (RVF) comes from wildlife, but it does not.

RVF is carried by rats and mosquitoes. The mosquitoes bite infected rats, then pass on the infection when they bite livestock.

Cases increase during the wet season when there are more mosquitoes and especially when heavy rains create standing pools of water where mosquitoes breed.

They also rise at the end of the rainy season, when rat populations increase.

RVF was unheard of in the Maasai Steppe of Tanzania until 1997, when an epidemic followed the heavy rains of El Niño. It seemed under control after that until an unusually wet season in late 2006, when an epidemic spread from the Rift Valley region of Kenya. In 2006 and 2007, RVF epidemics in both Kenya and Tanzania killed thousands of cattle and more than 150 people.

Climate change is likely to produce more seasons of unusually heavy or long rains, so RVF epidemics are expected to continue.

Look for ...

- **In livestock:** A wave of spontaneous abortions in cattle, sheep or goats.
- **In people:** Flu-like symptoms including sudden fever, headache, muscle and back pain. If you have jaundice and vomiting, go to the clinic immediately, or hemorrhage, blindness or death may follow.

Be careful

People can get RVF through mosquito bites, from slaughtering or eating infected animals, possibly from drinking raw milk and even from inhaling the virus from the carcass of an infected animal.

RVF affects tomorrow's herds since it interferes with breeding.

In case of an epidemic, animals from the affected area will be quarantined. During the epidemic and for a month afterward, it is illegal to sell animals (cattle, sheep or goats) and products (milk, meat or hides).

If you see abnormal abortions, immediately report them to the Village Executive Officer, or Extension or Veterinary Officer.

Prevention and control

For livestock: annual vaccination is effective. A community or government effort to protect all cattle is best.

For people: Use bednets to prevent mosquito bites. Also avoid directly touching an aborted foetus. Protect yourself by using plastic gloves or plastic bags on your hands. Then bury the carcass deep enough not to be dug up by dogs and other predators.

Government programs can help by being prepared with vaccines after heavy rains. Response must be swift to be effective.

There is no known treatment for RVF.

3. Foot and Mouth Disease (FMD)

(Maa: Oloroibi, Swahili: Ugonjwa wa midomo na miguu)

What you need to know

Foot and Mouth Disease (FMD) affects cattle, sheep, goats, buffalo, antelope and sometimes elephants. It moves swiftly through a herd, killing very young animals and causing dramatic loss of weight and productivity in others.

Foot and mouth disease is transmitted by direct contact from one animal to another. It can also be carried by the wind – as far as 250 km!

People rarely get the disease.

A decade ago, FMD would typically strike herds once a year. Now, in much of East Africa, it occurs three times a year. In addition, as the climate warms, more strains are emerging.

Look for ...

- A number of livestock that show drooling, blisters and lameness at the same time.
- Calves dying suddenly from a heart attack.

Be careful

FMD has huge economic effects. A cow's milk production can drop by 75 percent for the rest of her life. In addition, instead of calving every year or so, she might calve every two or three years.

Prevention and control

Vaccination can work but is expensive, since vaccines are imported and now must cover multiple strains. Communities can plan for and buy vaccines cooperatively. A few communities in northern Tanzania are already doing this.

Government has a role to play in prevention. For instance, the Tanzanian government has pledged to subsidize vaccinations for some 2 million cattle. Yet the country has nearly 20 million and all could benefit.

FMD is a danger particularly where land is shared with buffalo and wildebeest. So FMD and the cost of vaccines are two of the many reasons that communities should consider land-use planning and conservation-based ventures (see Modules 2 and 3). Such businesses help communities offset the cost of living with wildlife, earning income from its presence.

4. Malignant Catarrhal Fever (MCF)

(Maa: *lingati*, Swahili: *Ugonjwa wa Nyumbu*)

What you need to know

Two separate viruses cause Malignant Catarrhal Fever (MCF) in cattle. One is carried by sheep and goats, the other by wildebeest and oryx.

The latter is particularly a problem when and where wildebeest calve. The calves give off the viruses for three months after birth.

For centuries, MCF did not significantly affect pastoralists because they moved their herds to other areas each year during the wildebeest birthing period.

This traditional land-use planning system has broken down, though, over the last few decades as competition for land has risen and cattle and wildebeest graze together even during the sensitive birthing period.

Unless mitigating steps are taken, there will be more and more contact between cattle and wildebeest, so MCF is likely to continue to increase.

Look for ...

A cow's eyes become opaque. The animal soon goes blind and dies.

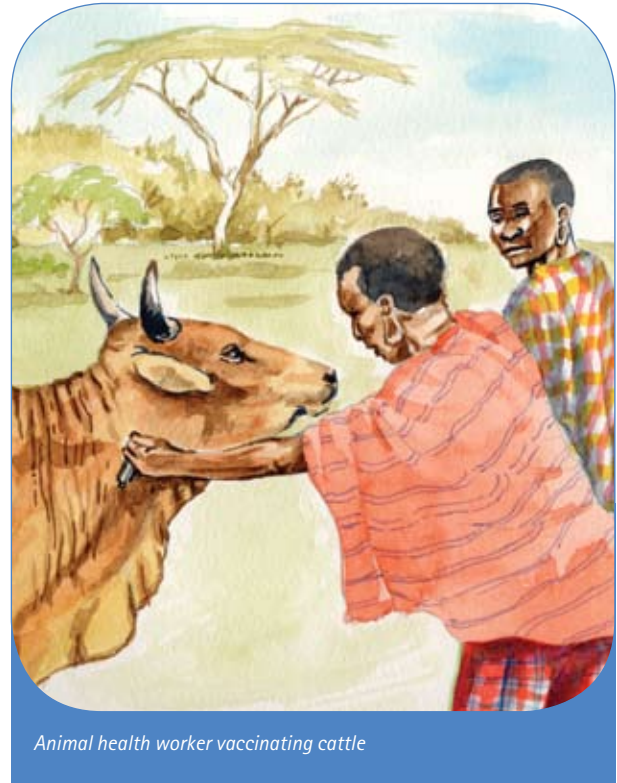
Prevention and control

No vaccine or treatment currently exists.

Control would be through wise land use. Land-use plans should take into account the needs of cattle owners as well as the movement and breeding sites of wildebeest. Plans might incorporate a separate grazing area for cattle during the wildebeest birthing season, roughly late February to May. See Module 2 on participatory land-use planning.



Wildebeests calving



Animal health worker vaccinating cattle

5. Corridor Disease (Theileriasis)

(Maa: *Engeeiya Nairowa*, Swahili: *Ndigana moto*)

Corridor disease includes a number of fatal cattle diseases, of which East Coast Fever (ECF) is the most common.

ECF is transmitted by the brown ear tick, which infests wild buffalo. Buffalo prefer bushy places – the same locations that cattle typically graze during the dry season.

Look for ...

The disease has few visible symptoms, though deaths usually occurs from respiratory problems.

Prevention and control

Drugs to treat Corridor Disease exist but are expensive; control is preferable.

Communities and government officials can organize cattle dips to kill the carrier ticks. Traditionally pastoralists burn pasture shortly after the end of rainy season, i.e. early dry season (the time when migratory wildlife e.g. buffalo also return to parks). Burning is also done to encourage new-growth for grazers in these areas, hence double effect.

Land-use planning is also an important measure. The more space there is for livestock and wildlife, the less likely that cattle will encounter buffalo and their ticks.



Dipping of cattle

6. Trypanosomosis

(Maa: *Endorobo*, Swahili: *Ndorobo*)

What you need to know

Trypanosomosis (tryps) infects wild animals, livestock and people. It is carried from one infected animal or person to another by tsetse and other flies. In people it is called "sleeping sickness."

Tryps is another disease on the rise. In previous eras, people avoided bushy areas where tsetse flies are common. Today, pastoralists are being pushed into these areas as more desirable land is taken for farms.

Called "*entorobo*" in Kimaasai, tryps is one of the most destructive livestock diseases in Africa since it sickens so many animals, costs so much to treat and can recur again and again in the same individual animals. It infects and kills cows, sheep, goats, donkeys and dogs.

Be careful

Some pastoralists in East Africa spend more money fighting tryps than on any other aspect of pastoralism.

One recent study found that up to 15 percent of cattle in part of southern Kenya contract *entorobo* in any one month.

In humans, sleeping sickness is fatal. Tarangire and Babati Districts in northern Tanzania are considered sleeping-sickness zones.

Look for ...

Chronic fever, swelling, dermatitis and nervous disorders. The disease leads to severe weight loss, anaemia and death. Definite diagnosis can only be made by an appropriate laboratory.

In people, sleeping sickness produces fever, headaches, joint pains and itching. The second stage involves the central nervous system and can create poor coordination, confusion and sleep abnormalities. It is treatable, but can be fatal without treatment.

Prevention and control

Most effective would be land-use planning that ensures pastoralists adequate land free from tsetse flies.

Tsetse-fly areas are usually rich in wildlife, however, so make good areas for tourism and can double as emergency herding land during drought.

In tsetse-infested areas, residents attract and kill the flies by placing pieces of black, blue, or white cloth, dipped in pesticide, on trees or shrubs.

Drug treatments exist for tryps, but the microbes can become resistant. Equitable land-use planning for control is preferable.

Key points to remember

- 1** Due in part to changes in climate and land-use, common livestock diseases are on the rise in pastoral areas of East Africa. Along with reduction in rangeland and sharing the land with wildlife, the diseases place an added burden on the pastoralist community.
- 2** Livestock diseases can be reduced by planning and equitable land-sharing, ensuring that pastoralists are not relegated to the most disease-infected parcels of land. They need adequate space, a degree of movement and flexibility to keep herds healthy.
- 3** When conducting land-use planning, pastoral areas should be carefully mapped: where are livestock, in which season? Where are wildlife diseases most common? If villagers make use of land in neighbouring villages, joint planning can be helpful.
- 4** In addition, conservation-based businesses should be encouraged, with income directed to the community. Pastoral communities could greatly benefit from multiple streams of income.
- 5** Efforts to combat the effects of increasing drought could be helpful as well, for instance, rainwater harvesting and development of traditional wells and dams.
- 6** Government has a huge role to play in supporting communities with vaccination and other disease-control programs. Extension programs by veterinary officers could be strengthened and graduates of the veterinary college in Emboreet, for instance, deployed to agro-pastoral areas.

Key points to remember

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