# MOVING HERDS, MOVING MARKETS

## Making markets work for African pastoralists

PASTORALISTS PRODUCE much of Africa's meat and milk, and they are important – though underestimated – part of the economy of many African countries. But they face huge challenges in trying to sell what they produce. They are scattered across vast expanses of dry rangeland, without the roads, basic infrastructure and services that farmers in more favoured areas take for granted. Many move from place in search of pasture and water, making it hard to provide them with the services they need. With few market opportunities, they have little incentive to improve their production. Periodic drought can force herders across an entire region into relying on outside assistance. How, then, to improve the markets for pastoralist products and help pastoralists overcome the cycle of poverty?

This book offers some solutions. Drawing on 15 cases from nine countries: Benin, Botswana, Burkina Faso, Ethiopia, Kenya, Mali, Niger, Tanzania and Uganda, it identifies four key features of pastoralism in Africa (mobility, extensive grazing, the use of common land, and local breeds). It presents the challenges and opportunities of marketing live animals, meat, milk and leather products. It discusses better ways to ensure that pastoralists have the inputs they need to produce efficiently: animal health, feeding, and breeds and breeding. It investigates the services that are required for the marketing chain to function: market information, financial services, transport, marketplaces, processing facilities, and quality control. It looks at three aspects of the skills and organization needed for pastoralist markets to function: capacity building, organization, and gender issues. Finally, it makes recommendations for government and donor policies, and discusses the best places for development efforts to intervene in order to improve marketing.

Throughout, the book focuses not just on pastoralists but also on other actors in livestock value chains, including traders, processors such as abattoirs and dairies, and service providers such as financial institutions, advisory services, government and development organizations.

ISBN 978-92-9081-544-0

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Published 2014 by the International Institute of Rural Reconstruction and the Technical Centre for Agricultural and Rural Cooperation.

**International Institute of Rural Reconstruction (IIRR)**, Africa Regional Office, PO Box 66873, Nairobi, Kenya. Tel. +254 20 237 0039/41/43, fax +254 20 444 8148, email admin@iirr.org, website www.iirr.org

The International Institute of Rural Reconstruction is a non-profit, non-governmental organization that aims to improve the quality of lives of the rural poor in developing countries through rural reconstruction: a sustainable, integrated, people-centred development strategy generated through practical field experiences.

**Technical Centre for Agricultural and Rural Cooperation (CTA)**, PO Box 380, 6700 AJ Wageningen, The Netherlands. Tel. +31 317 467100, fax +31 317 460067, email cta@cta.int, website www.cta.int

CTA is a joint international institution of the African, Caribbean and Pacific (ACP) Group of States and the European Union (EU). Its mission is to advance food and nutritional security, increase prosperity and encourage sound natural resource management in ACP countries. It provides access to information and knowledge, facilitates policy dialogue and strengthens the capacity of agricultural and rural development institutions and communities. CTA operates under the framework of the Cotonou Agreement and is funded by the EU.



**Correct citation** IIRR and CTA. 2013. *Moving herds, moving markets: Making markets work for African pastoralists*. International Institute of Rural Reconstruction, Nairobi; and the Technical Centre for Agricultural and Rural Cooperation, Wageningen, The Netherlands.

This publication can be ordered from CTA: http://publications.cta.int./en/

**ISBN** 978-92-9081-544-0



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# Acknowledgements

The writeshop and production of this publication were supported by grants from the following organizations:


The Technical Centre for Agricultural and Rural Cooperation (**CTA**), which provided the grant that enabled most of the writeshop activities to take place.


The Food and Agriculture Organization of the United Nations (**FAO**)


The Catholic Organisation for Relief & Development Aid (**Cordaid**)


The **Ford Foundation**

Sincere thanks also to:

- The pre-writeshop participants who attended a meeting in Nairobi on 1 August 2012 and helped develop the book structure and identify potential authors.
- All the individuals (see next page) who contributed the cases, participated in the writeshop in Nairobi in December 2012, and drafted the other sections of the book.
- The resource persons who provided technical inputs during the writeshop. Special thanks to Eric Mwaura, who carried out the background study that provided the context of the publication.
- The team at IIRR's Africa regional office, especially Janet Nyaoro, who provided facilitation and managed all logistics, and Isaac Bekalo, who provided overall leadership and donor liaison.
- The editorial team, led by Paul Mundy, who worked on individual manuscripts and brought the various pieces together to produce the publication.
- The artists Bonaventure Nyotumba and Alfred Ombati, who drew the illustrations and designed the cover.
- The non-government organizations, pastoralists and government officials who did not participate in the writeshop but whose cases are reflected in this book.
- Andrew Shepherd of CTA, for many valuable comments and suggestions during the planning and editing.
- Dominic Graham and Bree Oswill of Mercy Corps Ethiopia for additional information.



# Foreword

Sub-Saharan Africa is home to more than 25 million pastoralists and over 200 million agro-pastoralists. Together they occupy 43% of Africa's total land mass and constitute over a quarter of the continent's population. Pastoralists live in some of the world's most difficult environments. They lack access to infrastructure such as roads, telecommunications, markets and other support services.

Globally, the demand for livestock products is growing fast as a result of changing diets arising from increasing disposable income. However, while pastoralism is an important part of the African economy, its real contribution to GDP is not appreciated due to the difficulty in collecting data on production, trade and consumption. The contribution of pastoralism to the region thus tends to be undervalued, and pastoralist communities in many African countries have a limited voice in policy debates compared to more settled agricultural groups and urban populations.

Pastoralists' efforts to access markets are hampered by a host of problems. They have to travel long distances on dusty, dangerous roads to reach a market. In addition, they face road blocks, security threats, health inspections and other regulatory procedures, often based on rules unknown to them. By the time they arrive at the market, their animals will have wasted and lost weight.

Drawing upon a wealth of experiences from a wide variety of sources, this book documents good practices and lessons in the marketing of pastoral livestock and livestock products in sub-Saharan Africa. Prepared in a collaborative way through a "writeshop" approach, it describes the problems pastoralists face in marketing their products, and provides practical suggestions for governments, development organizations, the private sector and pastoralists themselves to address these issues.

The book is intended to be used by people working in or supporting livestock value chains. The examples provide many good practices that pastoralists, agropastoralists and others can apply to contribute to food security and livelihoods of pastoralist communities. The book suggests ways to strengthen partnerships among various chain actors – livestock producers, transporters, service providers, regulators and others – to develop effective marketing systems. Attention is also paid to providing inputs such as health care and to suitable feeds and breeds to make it possible to produce high-quality livestock for markets. The book also covers ways of organizing services such as market information, financial services, transport, marketplaces, processing facilities, and quality control to make markets work better for pastoralists. Finally, attention is paid to the skills, organizations and policies needed to make pastoralist markets function more efficiently.

The challenge is how to scale up and out the good practices and innovative success stories of individuals, organizations and communities reported on here, in order to reach millions of pastoralist and agropastoralists. Across sub-Saharan Africa it will require strong collaboration among pastoralist communities, NGOs, the private sector and governments to put into action the recommendations identified in this book.

CTA and IIRR, as well as our partners, Cordaid, FAO and the Ford Foundation, hope the book will make a contribution to changing the livelihoods of Africa's pastoralists and agropastoralists.

**Michael Hailu**, Director CTA

**Isaac Bekalo**, President IIRR

# Contributors

## PARTICIPANTS

### Benin
**Albert Yatondé Houedassou**, SNV

### Botswana
**Anthony Kimotho Macharia**, Consortium Services

### Burkina Faso
**Tipoco Brigitte Ouedraogo**, SNV

### Ethiopia
**Abdurehman Eid**, Horn of Africa Voluntary Youth Committee and Jigjiga University
**Binyam Kassa Engidasew**, Ethiopian Institute of Agricultural Research

### Germany
**Evelyn Mathias**, TradiNova Livestock

### Kenya
**James Kariithi**, Ministry of Livestock Development
**Reuben Koech**, Heifer International
**Abdikadir Mohamed**, Kenya Livestock Marketing Council
**Eric Mwaura**, International Institute of Rural Reconstruction (IIRR)
**Sylvester Nyadero**, Turkana Meat Processors Co. Ltd/Lomidat Slaughterhouse

### Mali
**Bonaventure Dakouo**, SNV

### Niger
**Saratou Malam Goni**, SNV

### Tanzania
**Godfrey Chasama**, Tanzania Livestock Research Institute-Mabuki
**Jeremiah Joseph Temu**, Tanzania Meat Board

### Uganda
**David Balikowa**, Mbarara Zonal Agricultural Research and Development Institute
**Joshua Waiswa**, Uganda Meat Producers Cooperative Union

### USA
**Emma Proud**, Mercy Corps

## WRITESHOP STAFF

### Coordination and facilitation
**Isaac Bekalo Bateno**, IIRR (chief facilitator)
**Janet Nyaoro**, IIRR

### Editing
**Rose Kipyego**, IIRR
**Mary Ann Llanza**, IIRR
**Eric McGaw**, IIRR
**Evelyn Mathias**, TradiNova Livestock
**Paul Mundy** (chief editor and layout)

### Illustrations
**Bonaventure Nyotumba**
**Alfred Ombati**

### Logistics
**Caroline Chirimi**, IIRR

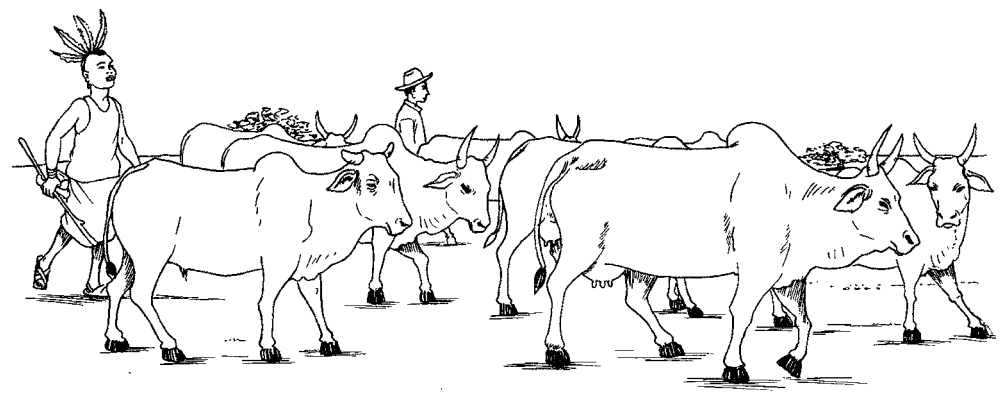
For contact details, see the *Contributors' profiles* at the end of the book.



# 1 Introduction

*The herders have a long, dusty trail behind them. They have driven their cattle, sheep and goats hundreds of kilometres from the grazing lands, and now they are finally nearing their goal: the market where they hope they will be able to sell them.*

*Many of the animals are thin after their long walk. Will they fetch a good price? Will there be any buyers? Or will the pastoralists be forced to sell them cheap rather than trek them all the way back again?*



Such problems are commonplace among pastoralists throughout a broad swathe of Africa, from Mauritania and Senegal in the west all the way to Somalia in the east, and south through Kenya and Uganda to Tanzania. In these countries, as well as in a chunk of southern Africa that covers much of Botswana, Namibia, South Africa and southern Angola, pastoralism is an important way of life and a big part of the economy.

This book documents impacts, good practices and lessons in the marketing of pastoral livestock and livestock products in sub-Saharan Africa. It depicts the types of problems faced by pastoralists in marketing their products, and shows in practical terms how governments, development projects, the private sector and pastoralists themselves can deal with these issues. It is intended for people working in and supporting livestock chains. That includes traders, community organizations, community facilitators, extension workers, livestock marketing associations and pastoralist groups. It also covers development agents working with pastoralists, donor agencies, business services, educational and research institutions and policymakers.

## IN THIS BOOK

**Chapter 2** discusses **pastoralism** in Africa and identifies four key features (mobility, extensive grazing, the use of common land, and local breeds) that enable it to produce food and support livelihoods in some of the world's more difficult environments.

**Chapter 3** focuses on the **markets** for pastoralists' products: livestock, meat, milk, hides and skins. It identifies the marketing chains that pastoralists are part of, and the various actors who play a role in these chains. It also discusses the types of markets they serve, and ways of developing products and markets.

**Chapters 4 to 6** turn to specific aspects of the production and marketing process. **Chapter 4** focuses on three types of **inputs** that make it possible for pastoralists to produce for a market: animal health, feeding, and breeds and breeding.

**Chapter 5** investigates the **services** that are required for the marketing chain to function. These include market information, financial services, transport, marketplaces, processing facilities, and quality control.

**Chapter 6** looks at the **skills and organization** needed for pastoralist markets to function. It addresses three aspects: building the capacity of pastoralists and other chain actors, helping these actors get organized, and issues of **gender**.

**Chapter 7** turns to the **policies** that affect marketing by pastoralists. It covers government policies and discusses the best places for development efforts to **intervene** in order to improve marketing.

**Chapter 8** gives a brief description of each of the **15 cases** that this book draws on. These cases are taken from nine countries: Benin, Botswana, Burkina Faso, Ethiopia, Kenya, Mali, Niger, Tanzania and Uganda, and cover the marketing of live animals, meat, milk and leather products. Most of the cases depict a development project funded by a donor or national government, while a few explain how a marketing system has evolved with little or no outside support. Some are parts of much larger, multi-country projects; others are smaller in scope.

At the end of the book, we give a short list of **references** and the contact information of the **contributors** to this book.

## HOW THIS BOOK WAS PREPARED

This book was prepared largely through an intensive, participatory "writeshop" held in Nairobi from 26 November to 6 December 2012.

Before the writeshop, IIRR circulated a call for contributions through its network of development partners and the internet. A total of 15 abstracts were selected as being appropriate for inclusion. The authors were then invited to the writeshop, were asked to submit a more complete description of their case, and were given guidelines on what to include. IIRR provided them with feedback on their cases, and asked them to revise the drafts and add details where required.

Each contributor brought a draft manuscript to the writeshop, along with other printed material and photographs relevant to their case. The writeshop participants included development professionals, government officials, researchers, and managers of cooperatives and private companies in livestock chains. They were assisted by a team of facilitators led by Isaac Bekalo, artists and





editors. The contributors and the writeshop staff are listed at the front of the book; their contact details are given at the back.

Each participant briefly presented his or her case using a handwritten poster, and responded to questions from the participants. He or she then worked with one of the editors to rewrite the text in compressed form. The results appear in Chapter 8.

During the bulk of the writeshop, groups of participants defined and discussed a range of themes: production inputs and services, finding markets, services related to marketing, capacity building, organizing actors, gender, and policy issues. This process was coordinated by Isaac Bekalo and his team of facilitators. Each group delineated the issue, described its importance, and discussed how to deal with it. The groups identified examples of how development agencies, the private sector, local organizations and governments have approached the problem, drawing on the cases or their other professional experience. They drafted text to reflect these deliberations, which they then presented to the plenary for comments and expansion. Each group was assisted by a facilitator, resource person or editor who guided the discussions. The results appear as Chapters 4 to 7 of the book.

Chapters 2 draws on a background paper prepared by Eric Mwaura, IIRR's regional manager for food security and wealth creation. This was substantially revised during the writeshop, and again afterwards to reflect the content of the book. Chapter 3 draws on an analysis of the cases done after the writeshop.

After the writeshop, the chief editor, Paul Mundy, converted the various manuscripts into this book. This task involved adding further analysis, revising material to eliminate overlaps, filling gaps, and ensuring that the manuscripts prepared by a large number of people were written in the same style.

The overall process was coordinated by Janet Nyaoro of IIRR.

# 2 Pastoralism in Africa

PASTORALISM IS an important part of the economy in much of sub-Saharan Africa, but exactly how important is hard to tell. Collecting data in pastoral areas is difficult, and much production, trade and consumption goes unrecorded. Families consume much of what their livestock produce themselves, or barter it for grain and other items, so it never enters the formal economy. Official statistics are likely to underestimate the true importance of pastoralists and their production system.

Overall, pastoralists and agropastoralists occupy 43% of Africa's land, and account for over a quarter of the total population: some 50 million pastoralists and up to 200 million agropastoralists live in the continent's arid and semi-arid lands. In countries such as Somalia and Mauritania, they form a majority of the population. With 7 million pastoralists and agropastoralists, Sudan and Somalia have the largest numbers, followed by Ethiopia with 4 million.

Pastoralists and agropastoralists own a third of Africa's cattle, half the sheep and goats, and almost all the camels. The largest numbers of animals are found in East Africa: Sudan leads with an estimated 18 million cattle, 18 million goats and 22 million sheep. In West Africa the most animals kept in pastoral or agropastoral systems are found in Niger (1 million cattle, 6 million goats, 4 million sheep) and Mauritania (1 million cattle, 4 million sheep and 6 million goats) (Rass 2006).

In **West Africa**, the contribution of the livestock sector to agricultural GDP ranges from 5% in Côte d'Ivoire to 44% in Mali. It provides employment for about 50% of the economically active population in West Africa. Livestock helps integrate the Sahel region economically: cattle, sheep and goats are among the biggest exports from landlocked countries to the coast.

In **Central Africa**, livestock contributes an estimated 27% of the GDP in Chad, 13% in Cameroon, and 9% in the Central African Republic. These three countries export livestock and livestock products to the Republic of Congo, Gabon, Equatorial Guinea, and São Tomé and Principe.

In **East Africa**, Sudan and Somalia are major livestock exporters to the Gulf; Ethiopia has a substantial informal export trade through Somalia, and a growing formal export trade to the Gulf, Egypt, Sudan and elsewhere. Livestock export facilities along the northern Somali coast and in Djibouti continue to grow, often with private-sector investment. In East Africa, pastoralist areas are also used for wildlife conservation and tourism, especially in Kenya and Tanzania, although the extent to which tourism revenues benefit pastoralists is unclear. In Sudan, the pastoralist-dominated livestock sector contributes 80% of the agricultural GDP. In Ethiopia the livestock-dependent leather industry is the second-largest source of foreign currency after coffee. In Uganda, pastoralists and small-scale livestock producers are the fourth-largest contributors to foreign currency earnings.

In **Southern Africa**, pastoralism accounts for about 60% of the national cattle herd in South Africa, and pastoralism is an important source of meat exports. In Namibia, the pastoralist-dominated livestock sector contributes 28% of the agricultural GDP, and 3% of total GDP. Namibian

pastoralists hold 80% of the national cattle herd, and cattle contribute about one-third of the income of traditional households (African Union 2013).

## WHO IS A PASTORALIST?

Governments do not have a uniform approach to defining pastoralists. For example, in **Ethiopia** the authorities put a "pastoralist" tag on geographical areas where these groups predominate (Brussels Development Briefings 2012). In **Kenya**, arid and semi-arid districts are clearly demarcated, but are not officially labelled "pastoralist". In **Uganda**, while the general public recognizes different pastoralist groups, the government regards only the Karamojong (and the Karamoja region) as pastoralist.

Pastoralists have been defined as "people making a living in drylands and obtaining a given percentage of their gross agricultural as opposed to total income from livestock" (Rass 2006). Another definition groups them according to their mobility, ranging from entirely mobile "exclusive pastoralists" to semi-settled "agropastoralists":

- **Exclusive pastoralists** are livestock producers who have no permanent settlements, grow no crops, and depend on the sales of animals and livestock products to buy grain. Some communities migrate over long distances, commonly along set routes where they may have standing agreements with farmers to make use of their crop residues. Other pastoralist groups may move their herds only short distances between wet- and dry-season pastures.
- **Transhumant pastoralists** have a permanent homestead, grow some crops mostly for home use, and may move only parts of their herds in search of grazing.
- **Agropastoralists** are semi-settled, hold land-rights, and grow their own staple crops and sometimes crops for sale.

Pastoralists' herds can be quite large, because livestock are their main asset, and they need a minimum number of animals to survive drought cycles (Rass 2006). The herds of agropastoralists are often smaller.

In reality, the systems often overlap. Settlement politics, economic development and changing environments further reduce the differences and are moving the balance more and more towards agropastoralism.

This book uses a combined economic and cultural definition: pastoralists are those who earn a large part of their living from livestock and livestock products. We use the term "pastoralists" to cover all three types: exclusive, transhumant and agropastoralists.

Because their animals are such a crucial part of their lives, the pastoralists' daily and seasonal activities are centred on the animals' needs. To make sure they have enough to eat and drink, they must be guided to the best pastures and waterholes. To prevent them from straying and to protect them from predators and thieves, they must be guarded day and night. Diseases must be controlled, breeding managed, and calves, lambs and kids cared for. The animals must be milked, and the milk turned into butter so it can be stored.

Animals are also the basis for traditional social support systems in many pastoral communities. Pastoralists may loan animals to relatives, or employ herders to take care of a portion of the herd, so spreading their risk in case of drought, disease or theft. They may give animals to others to help them recover from a disaster, and expect others to reciprocate if they themselves are in





need. Nearly all important social events in pastoral areas involve livestock. Dowries, for example, are calculated in terms of the number of animals that must change hands.

## PRODUCING IN A HARSH ENVIRONMENT

The overwhelming feature of Africa's drylands is obvious: most of the time, they are dry. What little rain falls is highly seasonal and unpredictable, and tends to fall in patchy but heavy showers. The vegetation is sparse, but after the rain, the brown soil erupts into a lush expanse of green. This unpredictability makes it impossible to grow crops consistently without irrigation.

Pastoralism is ideally adapted to this environment. It is the only system that can consistently support people's livelihoods and produce valuable products in these harsh areas (Köhler-Rollefson 2012). It can do this because of four key features: **mobility**, **extensive grazing**, the use of **common land**, and the use of **local breeds**. These contrast with livestock-keeping by settled farmers, in which crossbred or high-yielding exotic breeds are kept in the same area on private land, and are fed with cultivated fodder and commercial feed. Pastoralists use few inputs (except labour); farmers use larger amounts. Agropastoralism falls somewhere between these two extremes (Figure 1).

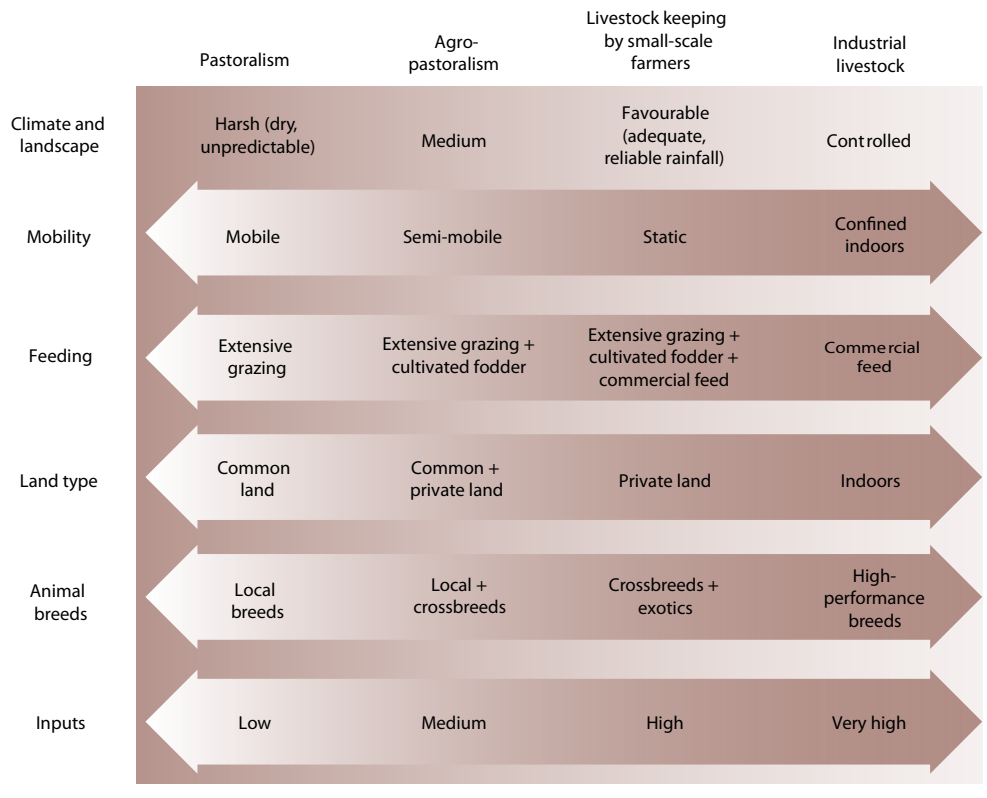



*Figure 1 Types of livestock keeping*

Below we contrast pastoralism with livestock-keeping by settled farmers. It should be remembered, however, that a wide range of gradations exist between these two extremes. And the two systems are not mutually exclusive: settled farmers may manage some of their animals in a pastoral system, and vice-versa.

### Mobility

Settled livestock keepers can keep their animals in a single location – perhaps even confined to a pen or stall. They can do this because they have enough feed and water all year round. Pastoralists cannot do this: they have to move from place to place because grass and water are scarce in the drylands. By moving from place to place, they can seek out locations with the best pasture and adequate water.

Moving around also helps pastoralists avoid certain pests and diseases. But it can also spread pathogens from one place to another, and livestock risk picking up pests and diseases from local herds or wildlife. Governments try to overcome such problems by imposing quarantines, banning the movement of animals from infected areas, and running vaccination campaigns. We discuss health issues further in Chapter 4.

Mobility means flexibility. Many pastoralists divide their herds, keeping most milking animals close to the homestead and sending the non-milking animals further afield – along with a few lactating females to keep the herders supplied with milk. In wet years there is ample pasture and water, and herds can expand to exploit them, converting grass into meat and milk. When rainfall is patchy, the herds can move to where there is grazing to be had. In drought years, they can be split up and taken to different locations to reduce the pressure on limited water and pasture, and to increase the chances that at least some will survive.

We can distinguish three types of movements.

- **Seasonal movements** Pastoralists go where there is grass to graze on and water to drink. They follow the rain: in the wet season in East Africa, for example, they herd their animals into the lowlands that are otherwise dry, while in the dry season they retreat to the wetter, higher ground. In West Africa, pastoralists follow the rains: south (or to the Niger Valley and shores of Lake Chad) during the dry season, and north in the wet season (see Figure 5 in Chapter 3). They may alternate between two areas, spending part of the year in each one (this is called transhumance). Herders try to limit grazing in a particular area to give the vegetation a chance to regrow. They often reserve certain areas for use during emergencies: they will allow their animals to graze there only during a severe drought. Pastoralists may avoid areas that are infested with diseases or parasites, or use them only at certain times of the year when the threat has declined. In West Africa, for example, pastoralists migrate over long distances to avoid problems with tsetse flies.
- **Daily movements** Animals are often kept in enclosures during the night to protect them from predators and thieves, and go out to graze during the day. Herders make the most of diverse grazing sites – hedgerows, field borders, fallow fields and crop residues, as well as places where rain has fallen and the grass has grown. They may herd several animal species together: camels, cattle, sheep, goats, horses and donkeys all have different fodder preferences. That makes maximum use of the available vegetation.





- **Market movements** Roads are scarce in pastoralist areas, and transport is scarcer. So herders or traders have to drive the animals they wish to sell to the market – often over huge distances. They follow traditional routes where grazing and water are to be had. Despite this, the animals often arrive thin and exhausted, and some may die along the route.

Such movements are often well-established, with particular groups having set areas and migration patterns. In many societies, the elders (almost always men) decide on long-distance movements and coordinate with other groups in the area. The herding itself is typically done by younger men or hired hands.

### Feeding

Settled livestock keepers have a range of options for feeding their animals. They may allow them to graze on natural vegetation, on sown pasture, or on stubble after the crop harvest. They may keep them confined with fences, by tethering them with ropes, or by having someone tend them to make sure they do not wander off. They may put the animals in a pen or stall, and feed them with cut forage, hay, silage, or commercial feed. The farmer has a lot of control over what and how much the animals eat. Water is generally plentiful, so animals rarely go thirsty.

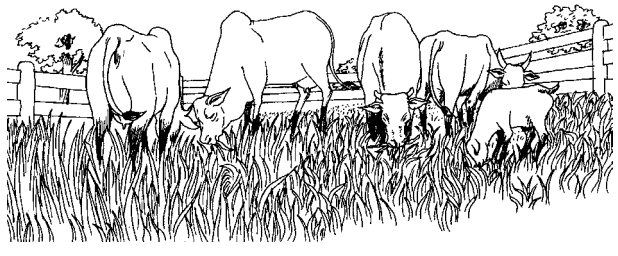
Pastoralists have far fewer alternatives, and far less control. Larger herds and bigger areas mean that fencing, tethering and stall-feeding are not options: someone has to herd the animals to prevent them from straying. The animals have to eat what they can find – and that may be very little. Water is scarce: the area that can be grazed depends on the location of scattered wells, ponds and waterholes. In the dry season and during droughts, many such water sources dry up, and animals have to trek long distances to drink.

We discuss feeding in more detail in Chapter 4.

### Type of land used

Settled livestock keepers typically graze their animals or grow forage on land that they own or have exclusive use to. They may also send their animals out to graze on common land, such as communally owned pasture, hedgerows and roadsides. These areas are located close to the homestead; the farmer typically brings the animals back home each evening.

Pastoralists, by contrast, are overwhelmingly dependent on common land. They graze their animals there for much or all the year, moving wherever there is grass and water, and sharing the resources with other herders. After the harvest, they may herd their animals onto farmland to graze on the crop residues. Farmers usually welcome this: they know that the animals suppress weeds and fertilize the fields with their dung. Many pastoralist groups have time-honoured un-



*Many farmers welcome pastoralists' animals onto their land to graze on crop residues. Some even sow forage crops for the animals to graze on.*

derstandings with farmers to do this. Some farmers rent their land out to pastoralists; others own cattle that they put in the herders' care.

While many groups share pastureland and water resources in an amicable way, disputes inevitably occur. Farmers object when the herders' cattle trample their fields, eat standing crops and muddy water supplies. Disputes arise along the routes that pastoralists use to herd their animals to and from dry-season pastures, and to market. Conflicts also occur between groups of pastoralists. Raiding other groups' livestock is a longstanding practice in many areas. In the days of bows and arrows, this led to few deaths, but nowadays many pastoralists have automatic weapons, and raids may lead to heavy loss of human life. They turn large tracts of land into effective "no-go" areas, where only one group, or none at all, can graze their animals. Government attempts to suppress the violence are sometimes heavy-handed. Cross-border raids can lead to international tensions. The climate of insecurity in pastoralist areas dampens trade and investment, hampers development efforts, and contributes to the overall poverty of such areas.

Fencing (or "land grabbing") is another problem. Farmers have fenced off many of the better pasturelands and started to use them for growing crops. New fences keep animals away from water sources and block migration routes. Livestock corridors are becoming narrower and fewer. Pastoralists are being excluded from traditional grazing grounds and transit corridors by large-scale land acquisitions for commercial crop production and the gazetting of wildlife reserves or national parks. Such lands are often the pastoralists' traditional emergency dry-season grazing lands. As a result they are forced into ever more marginal areas. Some pastoralists respond by trying to get exclusive use of the land for themselves, or by parcelling out traditional grazing land to particular families or clans (Box 1).

### Breeds

Settled livestock keepers have an option: they can keep local breeds that are adapted to the prevailing climate, feed and management conditions. Or they can choose crossbred or high-yielding "exotic" animals, such as the black-and-white Holstein-Friesian dairy cattle familiar in Europe and North America. Such exotics (and to a certain extent the crossbreeds too) have to be pampered: they have to get the right types and amount of feed, enough water, suitable housing, and modern veterinary care. Not for them a life of trailing through the bush in search of a few blades of dry grass. With the right inputs and conditions, they produce large amounts of meat and milk.

Pastoralists need animals that can survive in much harsher conditions, with long treks over difficult terrain, sparse grass and thorny vegetation, little water and only traditional veterinary care. That means hardy local breeds that are adapted to such conditions. But these breeds have a downside: they grow slowly and produce less meat and milk than their high-yielding cousins. That does not matter in traditional production systems: pastoralists merely keep a few more animals to get the production they need. But is a problem when it comes to marketing: processors, retailers and consumers want a reliable supply of uniformly high-quality meat and milk. It is hard for local breeds kept under pastoralist conditions to supply this.

Pastoralists also spread their risk by keeping large herds: a lot of animals can make the best use of abundant grazing during times of plenty. And in a drought, at least a few animals will survive and allow the herd to be rebuilt quickly when the rain begins to fall again. They also keep several types of animals – camels, cattle, sheep and goats – which can feed on different types of vegetation.

We discuss breeds further in Chapter 4.





**Box 1 Land: Communal or private?**

**Ethiopia**

Harshin, a pastoralist district in eastern Ethiopia, is divided into 13 communities. The area has good grassland and forest areas where sheep, goats and camels are raised. In the early 2000s, some pastoralists started creating private enclosures on parts of the communal rangeland. This instigated a widespread grabbing of the rangeland.

The community elders decided to divide the land peacefully among themselves rather than to fight over it. In the end, 12 of the 13 communities decided to convert their communal rangeland into privately owned parcels. Only one community, Abokor Ahmed, decided to retain its communal land. The elders there convinced their community that it was in their best interests to keep the land communal. Now pastoralists from the other communities come there during times of drought to use the communal rangeland. This has saved many animals from different areas in the last few years.

**Kenya**

Garba-Tula, part of Isiolo county in Kenya, is inhibited by Borana pastoralists. The area has good pasture, but water is scarce. When customary use of communal land weakened, the pastoralists started grazing anywhere, without considering the seasons. That caused degradation and made it hard for the pastoralists to survive even minor droughts.

The elders decided something had to be done. With the help of educated people in the community, in 2005 they passed a bylaw, based on a traditional law, that divided the land into three areas: a grazing area that could be used only during the rainy season, another area to be grazed only during the dry season, and a reserve to be used only during times of drought. This allowed them to manage their rangeland better and helped save 96% of their livestock during the 2009/10 drought, which killed many animals in other areas.

## BALANCING PRODUCTION AND MARKETING NEEDS

From a marketing point of view, these four features (mobility, extensive grazing, the use of common land, and local breeds) are disadvantages. Animals that are constantly on the move have little opportunity to put on weight. And it is difficult to sell or buy a moving product: imagine trying to arrange to pick up milk from a dairy herd when you do not know where the animals will be from one day to the next. Extensive grazing on poor vegetation means that animals cannot produce the consistent quality and quantity of products that modern markets demand. A reliance on common land is increasingly challenging when the trend is towards the private ownership and exclusive use of land. Local breeds may be hardy and survive in tough conditions, but they produce little milk, and their meat is tough.

To market pastoralist products effectively, it is necessary to find ways to balance these four key features with the needs of marketing. There are two main ways of doing this:

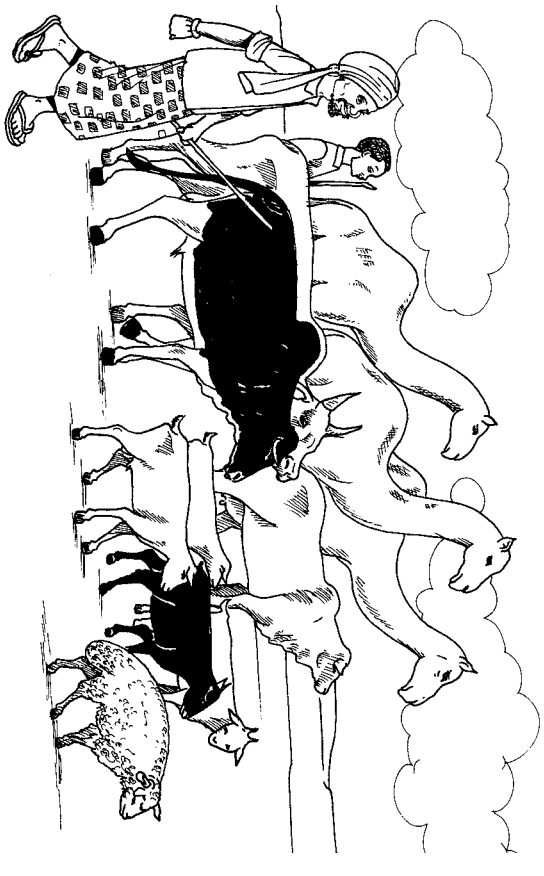
- **Adapting production to suit the needs of marketing** For example, milk producers may split their herds: they keep their milking animals in a particular area to make it easy to sell the milk, while the other animals range widely in search of pasture. Other approaches include improving breeding stock and veterinary services, supplemental feeding, and the creation of feedlots to fatten underweight animals.

- **Adapting marketing to suit the needs of production** Approaches include building marketplaces, abattoirs and dairies in pastoralist areas; reorganizing the management of marketplaces, organizing cooperatives to collect milk or market animals, organizing transport, and working with traders to improve their efficiency.

## CASES IN THIS BOOK

This book draws largely on the 15 cases described in Chapter 8. Table 1 summarizes key aspects of the production systems represented by these cases.

- **Income** Livestock account for at least 50% of the income in all cases, and up to 90% in some.
- **Products** include live animals, milk, meat and leather products.
- **Herd size** Some herds are small, with only a few animals – though this may be misleading: in the urban camels case in Ethiopia (Case 12), a family may have a large number of animals, but keep only one or two in town to produce milk for sale. In several of the cases, a household may own over 100 animals. Dairy producers tend to have smaller numbers of animals than those who produce live animals.
- **Breeds** In all the cases, the pastoralists keep local breeds. In some, they also keep improved local breeds or crossbred animals. There are very few animals of exotic breeds.
- **Mobility** The pastoralists typically herd their animals between 3 and 25 km each day, for example from the night enclosure to the grazing area or water source and back again. Some do not migrate at all: they keep their animals in the same general area all year round. Others migrate huge distances: 200 km in the case of Somali pastoralists in Ethiopia (Case 1), and 275 km for the Peulh in Niger (Case 15).



*Pastoralists spread their risk by keeping various species and breeds of animals.*





**Table 1 Summary of production systems in the 15 cases in Chapter 8**

| Case | Country, ethnic group | Income from livestock | Product | Animals per household | Breed | Average movement (km) | | Description |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Daily | Seasonal | |
| 1 | **Ethiopia**<br>Somali | ? | Live animals | 100 sheep and goats | Local; Somali black-headed sheep | 5 | 200 | Sheep and goats herded separate from camels<br>Family stays settled, herders go with animals<br>Wet season: return daily to homestead<br>Dry season: longer migration |
| 2 | **Kenya**<br>Samburu | 90% | Live animals | 30 cattle<br>100 sheep and goats | Zebu, Maasai sheep, African goats | 4 | 60 | Wet season: grazing near homestead<br>Dry season: grazing further away |
| 3 | **Kenya**<br>Maasai | 80% | Live animals | 70 cattle<br>100 sheep and goats | Zebu + crosses, local sheep, East African goats, Dorper | 15 | 100 | Extensive grazing |
| 4 | **Tanzania**<br>Maasai, Sukuma, Taturu | 50% | Live animals, meat | 100 cattle, sheep and goats | 98% Tanzanian shorthorn, Boran, and crosses<br>2% exotic or crosses | 3 | 50 | Animals grazed during the day, return to enclosure at night<br>Grow crops, buy forage or rent fields after harvest for grazing |
| 5 | **Uganda**<br>Bahima | 80% | Live animals, meat | 50 cattle | Ankole | 5 | 0 | Graze in fields during day, return to central place at night |
| 6 | **Mali**<br>Peulh | 80% | Live animals | 20 cattle | Local zebu breeds (Peulh, Maure, Azawak); Mere (zebu x N'dama); N'dama | 10 | 150 | Pastoral and agropastoral<br>Some animals stay at home and get supplementary concentrates |
| | agropastoralists | 40–60% | | | | | | |
| 7 | **Benin**<br>Peulh | 60% | Live animals | 50 cattle | Gudali, Bororo, Sumba | 25 | 30 | Mobility important<br>Use of corridors to reach water and pasture |

| Case | Country, ethnic group | Income from livestock | Product | Animals per household | Breed | Average movement (km) | | Description |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Daily | Seasonal | |
| 8 | **Kenya** Turkana | 80% | Live animals | 3–4 cattle 50 sheep and goats | East African Zebu cattle | 12.5 | 175 | Grazing on common land |
| 9 | **Botswana** Tswana | 80% | Live animals | 50 cattle | Tswana | 4 | 0 | Several pastoralists allocated grazing land but share a borehole |
| 10 | **Tanzania** Sukuma | 60% | Leather products | 100 cattle 40 sheep and goats | Tanzania short-horned zebu; small East African goat | 8 | 0 | Extensive grazing on common land or crop fields |
| 11 | **Ethiopia** Kereyu | 80% | Milk | 6 cattle 2 camels 6 goats | Local zebu | 7 | 20 | Women hand-milk cows |
| 12 | **Ethiopia** Somali | 80% | Milk | 1.5 camels | Somali camel | 6.5 | 14 | Wet season: mainly common pasture Dry season: additional cut forage |
| 13 | **Uganda** Ankole | 80% | Milk | 50 cattle | Ankole | 5 | 0 | Mostly unfenced natural pastures, a few fenced farms |
| 14 | **Burkina Faso** Peulh | 90% | Milk | 30 cattle | Local zebu | 5 | 125 | Natural pastures Dry season: bulk of herd migrates; a few pregnant/sick cows stay at homestead, get supplementary feeding |
| 15 | **Niger** Peulh | 85% | Milk | 1–5 dairy cows 100+ other cattle | Goudali, Azawak, Kouri, Bororo | 7 | 275 | Wet season: agropastoral and pastoral; grazing Dry season: additional forage |



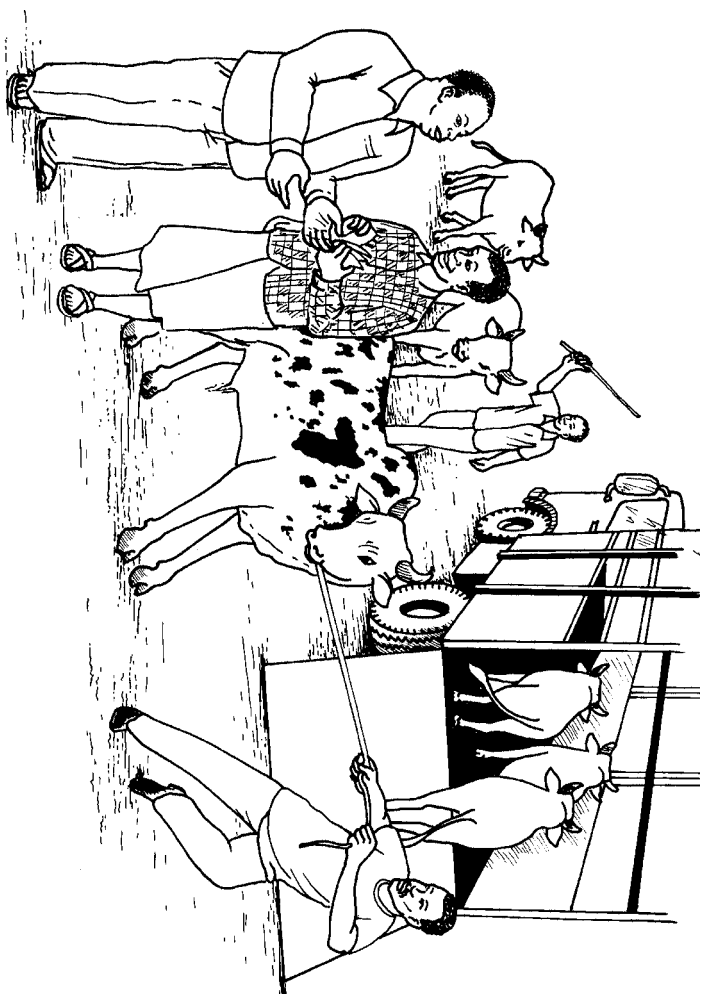
# 3 Markets for livestock and livestock products

THIS CHAPTER looks at the actual and potential markets for pastoralist products, and at the opportunities and constraints pastoralists face when serving these markets. It also looks at the strategies they might use to reach these markets.

## PASTORALISTS' MARKETING CHAINS

### Live animals

Pastoralists often view their animals as a source of wealth and status: the bigger the herd, the richer its owner. Animals have much the same status in pastoralist societies as big houses, fancy cars or paintings by famous artists in Western cultures. Pastoralists keep livestock not to make



*Live animals are a vital source of income for pastoralists.*

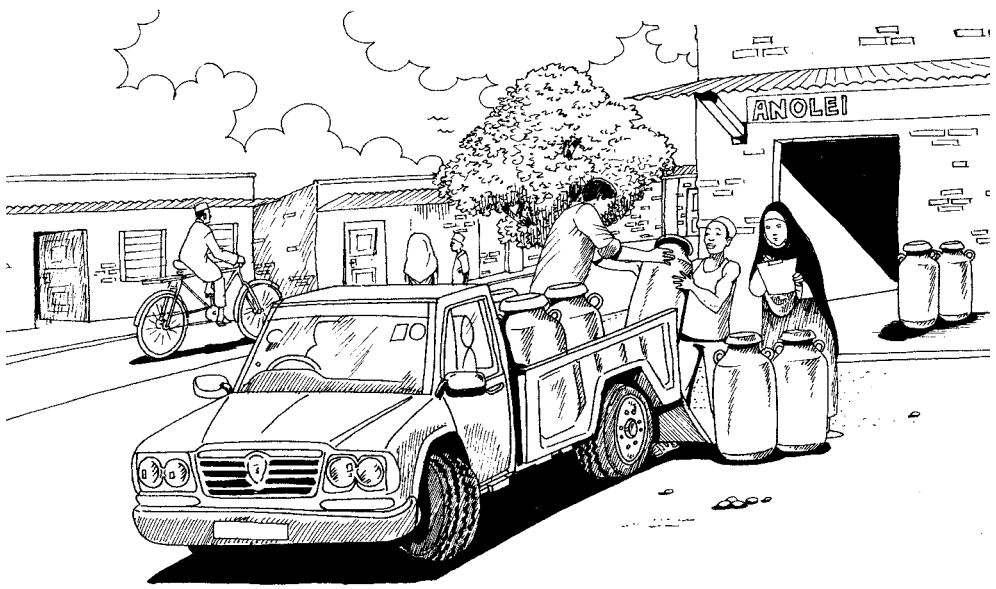
money, but to save money: their animals are a savings bank on four legs. Pastoralists are therefore reluctant to sell their animals even when the price is high, as that means converting a visible, productive asset under their direct control into something far less trusted: cash. They may decide to sell only when they see no alternative, when the animals are starving and the price has dropped to a fraction of its previous level.

Nevertheless, pastoralists cannot meet their food and other requirements from livestock alone: some poorer pastoralists acquire up to 85% of their food needs. They sell animals to buy staples such as maize and sorghum, as well as household items.

This means that the relative price of livestock and cereals is important, especially for poorer households. During a drought, feed and water are scarce, so animals get thin, fall ill and produce little milk. Their owners are forced to sell them in order to survive. More and more animals appear on the market, many of them emaciated, and the price falls. At the same time, the drought means that cereals are in short supply and demand for them rises, so they get more expensive.

The reasons pastoralists sell the animals they do, when they do, can be hard for outsiders to understand. They do not necessarily fit well with the demands of modern trading systems. The timing of sales may be driven by particular cash needs rather than market demand, and be less predictable than required for the optimum operation of abattoirs. The animals that pastoralists wish to sell may not be of the breed, age, weight and sex favoured by abattoirs.

Pastoralists' orientation towards the market varies considerably across Africa, with some groups in East Africa selling animals only rarely, while others sell animals to traders who export them to the Middle East. Cash is scarce in many areas, and much trading is done by barter. West African pastoralists have evolved sophisticated, long-distance trade networks that serve coastal cities, and use these to gather information about both market conditions and forage resources. Pastoralists in Botswana regularly supply animals to abattoirs for export.




*Milk is a regular source of income for many pastoralists, especially for women.*





But pastoralists' attitudes towards selling animals are changing. As droughts have become more frequent, and as market opportunities appear, some pastoralists have started selling more livestock than before. Many now sell their animals whenever the need arises.

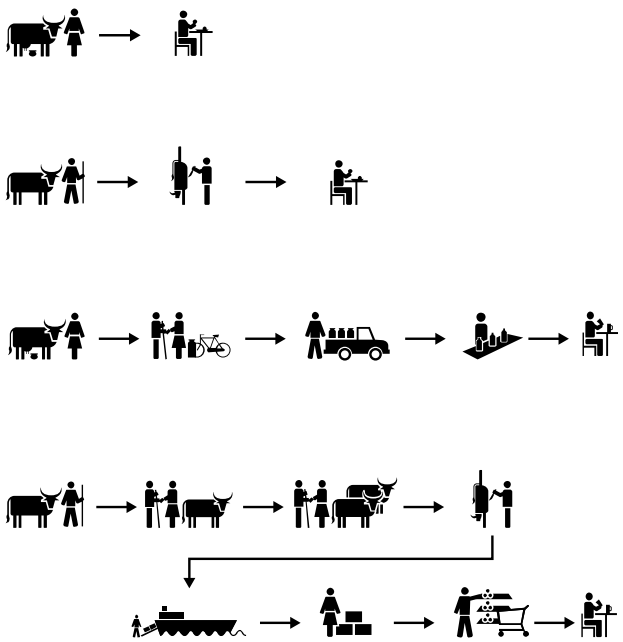
### Livestock products

Pastoralists produce a variety of livestock products: dairy products (milk, yoghurt, butter, etc.), live animals, meat products, hides, skins and wool. In the countries where they live, pastoralists supply 60% of the beef, 40% of the sheep and goat meat, and 70% of the milk. This book focuses solely on the marketing of live animals, meat, milk, skins and hides.

Pastoralists also engage in other types of activities. They use their animals to transport goods, pull ploughs and carts, thresh grain, lift water, and power mills. In some areas, camels are a tourist attraction and are used for riding. Many men go to the cities in search of work: Maasai security guards, often dressed in their traditional red blankets, are a familiar sight in the city of Nairobi and at tourist destinations. Another important source of income is gums and resins extracted from trees that grow in the drylands; these products are widely used in printing inks, food and confectionery, and incense.

### Marketing chains

When they sell their animals or products, pastoralists are at the start of a marketing chain (or "value chain", or "supply chain") that leads eventually to the consumer. There may be only a few **actors** in this chain, or there may be many (Figure 2).



The **pastoralist** sells milk direct to a **consumer** (two actors)

The **pastoralist** sells an animal to a **butcher**, who slaughters it and sells meat to **consumers** (three actors)

The **pastoralist** sells milk to a **primary collector**, who sells it to a **secondary collector**, who sells to a **market trader**, who retails it to a **consumer** (five actors)

The **pastoralist** sells an animal to a **trader**, who sells it to a **larger trader**, who sells it to an **abattoir**, which slaughters it and sells the carcass to an **exporter**, which ships it abroad and sells it to wholesale **butcher**, which sells cuts of meat to a **supermarket**, which retails them to **consumers** (eight actors)

*Figure 2 Marketing chains may involve only two actors, or many*

The length and complexity of the chain depends in part on the type of market served (see *Types of markets* below). Chains with **few actors** tend to be local and involve small numbers of animals (or small volumes of products): the product does not move more than a few kilometres from the place of origin. They may be informal and rely on barter rather than cash exchange. Chains with **more actors** tend to cover longer distances, incorporate more processing or value addition, and involve larger volumes. They are more formal, and have more stringent requirements in terms of quality and hygiene.

### Value addition, risks and costs

The actor at each stage in the chain **adds value** to the product. The most obvious source of value is the pastoralist who raises the animal or produces the milk. But a trader also adds value by selecting animals, bulking them (buying enough to fill a lorry) and transporting them to market. A butcher adds value by slaughtering the animal, cutting up the carcass into usable pieces, and disposing of the waste materials. A supermarket adds value by packaging the cuts, chilling them to preserve them, adding information on labels, and presenting them in a convenient place for consumers to buy.

Each actor also takes on **risk**. The pastoralist's risk is obvious: the animal may die before it can be sold. The trader also takes on risk: the animals may be diseased, die on the way, or turn out to be below standard. A supermarket may be left with produce it cannot sell.

Each actor also incurs **costs**. The pastoralist incurs the costs of raising the animal, feeding and watering it, and bringing it to a place where it can be sold. The trader incurs the costs of buying many animals and transporting them to a market. The supermarket incurs the costs of packaging, chilling, labelling and retailing. These costs include many components: equipment, fuel, wages, overhead, etc.

A marketing chain can work only if each actor in the chain makes a profit. If one makes a loss (for example, if the trader is robbed on the way to market), the chain cannot function, and everyone loses. Producers cannot sell their products, traders and processors do not have anything to do, and consumers have to go without livestock products. The frequent complaint that "traders exploit the pastoralists and make all the money" ignores the value that they add, the risks they take, and the costs that they incur.

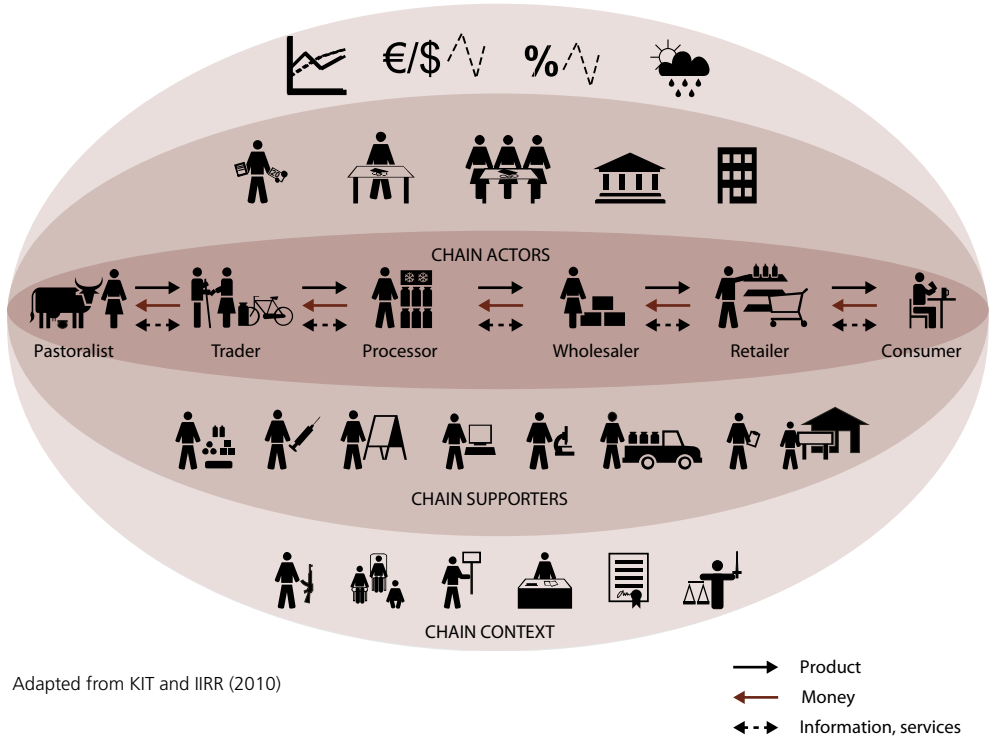
### Chain supporters and chain context

A marketing chain cannot work in isolation. It depends on a number of other people and organizations that provide services to the actors: veterinarians who check the animals are healthy, feed suppliers, pharmacies, microfinance organizations, NGOs who provide training, transport firms, packaging suppliers, and so on. The government (both national and local) may also supply some of these services, as well as infrastructure such as roads, electricity and markets, and information about prices. These are known as **chain supporters** (Figure 3).

The chain actors and supporters operate within a context that includes the larger economy, currency exchange rates, price fluctuations, and the weather. Government policies also set the framework within which the chain operates: they charge taxes and customs duties, grant licenses, set standards, enforce quarantines and bans, regulate animal movements, ensure the quality of drugs, operate veterinary services, maintain security and the legal system. Traditional rules and local








Adapted from KIT and IIRR (2010)

*Figure 3 Marketing chain actors, supporters and context*

leaders guide what is and is not permitted in a particular area. All of these things may facilitate (or hinder) trade and the operation of the chain. We refer to them as the **chain context**.

### Collaboration and competition

Both competition and collaboration are important in marketing chains. A seller and a buyer **compete** with each other because they have conflicting interests: the buyer wants to get a high price, while the seller wants to pay as little as possible. They may haggle fiercely before they reach agreement – or they may not reach agreement at all. If they do so, they must **collaborate** in order to agree on a transaction, in which an animal or product changes hands in exchange for money. They have to agree on a price, the amount and quality of the product being traded, and the place and time of the trade. The buyer may offer the seller credit, or the seller may agree to a delayed payment. They have to agree on details such as who pays for transporting animals, who is responsible for feeding and watering them, and when the payment is made. Each partner in the transaction has to trust that the other will keep to the terms of the deal.

The actors at each stage in the chain may also compete with each other. A pastoralist with a flock of goats to sell may accept a lower price than another herder who also needs to sell some animals. The price goes down. Two traders, on the other hand, may bid against each other, driving the price back up again.

But competitors can also benefit from mutual collaboration. It is not worth taking few cupfuls of milk into town to sell. But by putting them together with her neighbours' milk, a dairy producer may be able to fill a couple of jerry cans and hire someone on a motorbike to transport them to market. Traders, too, may collaborate: they may fix prices, or agree not to compete with each other for suppliers or customers. Supermarket companies may agree on a set of standards to ensure quality. Such collaboration may be benefit producers: for example, the existence of standards may make it possible for them to supply new markets. Or it may act to the producers' disadvantage, for example where traders collaborate to drive down the prices they pay to producers.

Competition and collaboration are also important for chain supporters who provide inputs and services such as drugs, feed, transport and advice. In theory (and given effective regulation to prevent fakes), competition keeps the prices of these low, and the quality high. In practice, however, there are too few providers for competition to be effective. The providers of inputs and services can charge high prices, and quality may be poor. That creates a vicious circle: it reduces demand, making it unattractive for other providers to enter the market. Collaboration is also important: advisory services, input suppliers and marketing agencies may collaborate to make sure their services are mutually compatible.

All actors in the chain have a common interest in collaborating to make the chain as a whole work better. They all want the transactions in the chain to be smooth, and consumers to be satisfied. They may undertake joint activities, such as introducing innovations, exchanging information or lobbying for policy change.

For the chain to work smoothly and to benefit all the actors in it, collaboration and competition must be in balance. Groups of pastoralists can agree to pool their milk or their stock for sale, making it easy and convenient for the trader to buy in bulk rather than having to source small amounts from many scattered producers. Many traders welcome such initiatives. Or the pastoralists may be able to cut out the trader altogether by taking the milk to town themselves and selling direct to a dairy. That should give them a better price – more than enough extra to cover the cost of transport – though they must also recognize that the time they spend is also a cost.

Many efforts at developing the marketing of livestock products focus on making the marketing chain work more smoothly – and especially to benefit the producers by helping them sell more and capture a larger share of the value of their product. That may mean increasing competition (for example, by setting up business service centres), fostering collaboration (such as helping producers form a cooperative), or some combination of these.

## MARKET OPPORTUNITIES AND CONSTRAINTS

### Market opportunities

Livestock production is a fast-growing sector globally, due in part to changing diets as incomes rise and more people live in towns and cities. Most of the increase in demand is in developing countries, offering important marketing opportunities for pastoralists.

The Food and Agriculture Organization of the United Nations estimates that global meat and milk production must double by 2050 to cater to this demand (FAO 2009). The increasing global production in livestock products is dominated by a few countries, notably Brazil and China (for meat) and India (for milk). Much of the increase in global output has been from intensively managed farms and ranches, where animals are raised on feed concentrates. This form of industrialized livestock production often excludes and undermines pastoralists and small-scale producers.





Africa currently contributes just 2% of global trade in livestock and livestock products. Nevertheless, this rise in demand is a huge opportunity for African suppliers, including pastoralists. In particular, the Middle East is a large and promising market for livestock and meat. Africa's growing cities with their supermarkets, restaurants, institutional buyers and rising middle classes are also large potential customers.

People in pastoralist areas can also earn more by adding value to their products, for example by doing more of the processing locally. They can also compete in niche markets, such as for organic products, or by complying with animal-welfare and other ethical standards.

Improvements in roads are opening up pastoralists' areas, and many pastoralists have been quick to take advantage of new technologies such as mobile phones, which enable people to share information and transfer money.

### Constraints to marketing

Many barriers stand in the way of pastoralists, traders and processors taking advantage of these opportunities.

**Production constraints** Pastoralists face many challenges in producing products that the market will accept. Periodic drought cuts production in bad years, and creates huge uncertainty even in good years: it forces herders to keep more animals than they might otherwise need. That reduces the number of animals that pastoralists are willing to sell. And if they do sell, they may wish to part with old, thin or infirm animals. They are unwilling to sell young animals, as these are the basis for the herd in the future. The market, on the other hand, prefers younger animals for their tender meat.

Pastoralists' needs – to be mobile, graze their animals on available pastureland (especially on common land), and for hardy local breeds – make it hard for them to produce for the market (see Chapter 2). Diseases cut production and productivity, resulting in traders or abattoirs rejecting animals, and in movement restrictions and export bans. We cover these issues further in Chapter 4.

**Inadequate services** It is difficult for the government and development organizations to provide services in sparsely populated areas, especially where much of the population is on the move. Services that urban residents take for granted are absent, hard to find or expensive. Take banking as an example: a typical bank runs branches in fixed locations, and it likes its customers to have a fixed address. Other examples include roads, electricity, clean water supplies, information and communications, financial services, retailers, security, education and health care for children and adults, as well as livestock-specific services such as input suppliers, veterinary care, marketplaces and processing facilities.

Few private firms are willing to invest in areas where the risks are high and the potential for profit is low. The same problems also make it difficult for pastoralists to access the services they need: they cannot visit a bank if they are hundreds of kilometres away across a trackless expanse of bush.

We discuss the difficulty of providing such services, and some ways of doing so, in Chapter 5.

**Skills and organization** Pastoralists have a deep knowledge of their animals and their environment (if they did not, they would not be able to survive). But most have little formal education: many, especially the women, are illiterate. They have few business skills and lack an

understanding of, or orientation to, the market. They also lack the technical skills needed, for example, to produce quality products that the market demands, or to add value to their products, for example by making cheese out of milk.

Pastoralists often have strong allegiances to their clan or extended family, and interpersonal communication systems often work amazingly well. But such systems are poorly adapted to marketing needs, where deals must be made with strangers, and producers must band together in groups in order to achieve the scale needed to supply a customer.

Women are at a particular disadvantage in many pastoralist societies: they may be prohibited from travelling far from home, and their husbands and brothers may make all the big decisions and control the family's income. We discuss these issues further in Chapter 6.

**Policies and intervention points** Policies matter in pastoralist areas – perhaps more so than in most other types of agricultural production. While things are generally improving, all too often, policies hinder rather than facilitate production and marketing by pastoralists. Whether by design or accident, governments and other influential bodies make it hard for pastoralists to raise animals, produce milk, and find a market for them.

This can change. Chapter 7 offers some suggestions for policy priorities and for the appropriate point of interventions to promote the marketing of pastoralist products.

## TYPES OF MARKETS

Pastoralists' markets for their animals and products are highly varied, so it is difficult to generalize. But they tend to fall into four broad types: local, national, cross-border and export, depending on whether they are formal or informal, and serve domestic or foreign consumers (Figure 4).

Local markets tend to have the lowest costs and risks, and are the easiest for pastoralists to serve. They impose limited demands in terms of quality. But they also have the lowest prices and potential returns for the pastoralists.

Export markets are at the opposite end of the spectrum: they involve greater risks and higher costs, and usually have stringent quality requirements. But the prices and potential profits are highest.

National and cross-border markets are intermediate. Serving a national market may imply the need to comply with strict quality requirements, but the levels of cost and risk tend to be lower than for the export market. The cross-border trade may have quality requirements that are similar to the domestic market, but the costs and risks of moving animals long distances across international boundaries are higher.

**Box 2 Livestock marketing in Turkana county, Kenya**

Pastoralists in Turkana sell their livestock to fellow herders who live with them in their *adakar* or kraal (a group of about 20 households who live together). These are members of livestock marketing associations. They in turn sell the animals to the only processor in the area, the Lomidat slaughterhouse. They may also sell to large-scale traders who buy animals in bulk and truck them to other parts of Kenya.

More information: Case 8.






*Figure 4 Types of markets for pastoralist products*

### Local markets

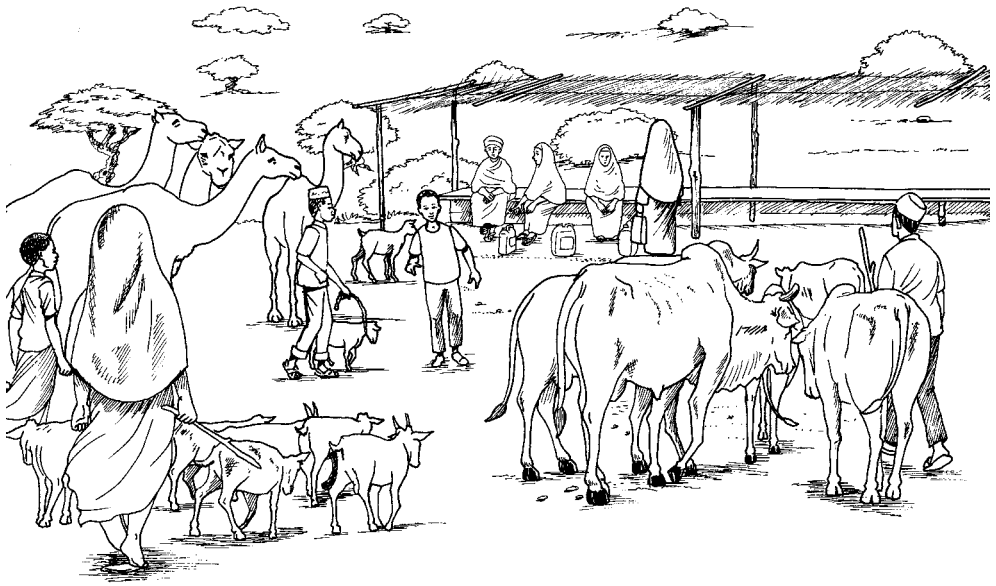
**Animals and meat** Pastoralists may sell to local traders (who are often pastoralists themselves) who visit their homes or encampments, or bring their animals to the local market for sale. Farmers and hauliers may buy animals to pull a cart or plough, while smallholders may purchase a female for breeding or milk production. A local butcher may buy perhaps one animal a day, slaughter it and hang the carcass in his or her shop. Consumers come to buy meat cut directly from the carcass. A lack of electricity and big coolers makes it impossible to keep meat for long, so it has to be sold quickly before it spoils.

This trade is informal, with each producer typically selling one or a few animals at a time. An exception is the annual Feast of the Sacrifice in Muslim areas, when large numbers of animals are herded into the towns for slaughter.

The market may be a long way from the pastoralist's home area. The pastoralist may herd the animals all the way to where they can be sold, or may hire (or entrust them to) someone else, often a relative, to do this. Alternatively, a trader may buy the animals and drive them to the market.

**Milk** Many pastoralists produce milk for their own use. They drink it fresh, or use it to make butter, ghee and other products (though not cheese, which is rare in most areas). They sell surplus milk either direct to consumers, or more usually to small-scale collectors, who go from house to house to collect small amounts of milk, which they then take to a shop or market for sale. Milk goes off quickly in the heat, so much is already sour by the time it is sold. The milk is not tested for quality before sale, and hygiene is often a problem.

**Local markets: easy, but low-value** For pastoralists, local markets are the easiest, cheapest and least risky to supply. There are few quality controls: it is still possible to sell thin animals and sour milk. The costs of transport, equipment, documentation and tax are relatively low. Processing is rudimentary, and only traditional skills are needed: herding, butchering, butter-making, etc. The



*When pastoralists get to the market, will there be anyone there to buy?*

government imposes few restrictions or taxes. The producers often know their end-customers, so know their tastes and requirements.

But local markets are low-value markets. Animals and livestock products fetch a low price, and traders, processors and transporters tend to make a bigger profit than the producers.

Local markets are also low-volume. They cannot absorb large amounts of a product at any one time, as local demand is limited. Prices fluctuate wildly as a result. A pastoralist who turns up at a small market with a big herd of cattle will not be able to sell them all, and is likely to see the price go through the floor. This is particularly a problem during drought, when many pastoralists want to sell their animals at the same time.

Local markets can, however, be an attractive outlet for pastoralists because they are less demanding than other markets. Improving facilities and services can make these markets more efficient and profitable for buyers and sellers alike.

**Examples in this book** Six of the cases in this book address the local market:

- **Case 2** Co-management of livestock markets in Kenya
- **Case 6** Inclusive management of cattle in Farakala, Mali
- **Case 7** Governance and self-management of cattle markets in Benin
- **Case 11** Formalizing *faraqa annani* women's milk marketing groups in Ethiopia
- **Case 12** Urban camel-milk production in Ethiopia
- **Case 14** Boosting milk production by supporting the emergence of local dairies in Burkina Faso.





## National markets

This trade is more formal, with animals passing through an abattoir, and milk being processed in a dairy.

**Animals and meat** Animals or products destined for the national market may start off first in the local marketing system. Larger traders may buy animals at the local markets, or small-scale traders may act as their agents, collecting a group of animals and shipping them to an abattoir, or to feedlots where they can be fattened until they are ready for slaughter.

But pastoralists may also supply animals directly to the abattoir. They may organize groups to do this: a single pastoralist may not have enough animals to make it worthwhile to hire a lorry, while a group can easily fill one (Box 2). That allows them to bypass the small-scale traders and negotiate higher prices.

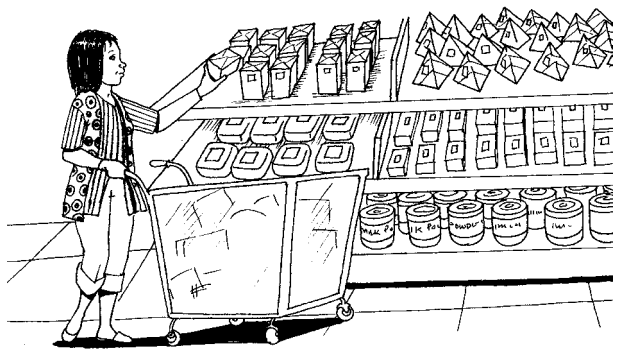
The abattoirs slaughter the animals, and produce carcasses, skins and hides and other products for sale. They may sell the carcasses to wholesalers or retail butchers for further processing: cutting them into joints, packaging, labelling, making mincemeat and sausages, etc. Some abattoirs perform these steps themselves. The meat may be sold to institutional buyers such as schools and restaurants, or to butchers' shops or (increasingly) supermarkets for sale to individual consumers.

**Milk** Dairy producers cluster around cooling and processing plants because of the difficulty of keeping milk fresh. Milk collectors may deliver milk directly to the dairy or to designated collection points, where the dairy arranges for it to be picked up and transported to a cooling plant or straight to the processing plant.

The milk is tested for fat content, non-fat solids (which shows whether the milk has been diluted), and acidity (which checks for bacteria). It is then pasteurized, cooled, packaged and distributed to wholesalers and retailers. It may also be converted into other products such as yoghurt, butter or cheese.

**National markets: higher value, but more requirements** Pastoralists can earn more by selling to national markets. But to do so, they have to supply what the market demands: better-quality animals and products, in bulk, and on a regular basis. They may have to promise to supply a certain number of animals (or amount of milk), of a certain quality, at a particular time. Keeping such promises can be difficult for pastoralists who live in an uncertain environment and who move from place to place.

Nevertheless, national markets are a promising outlet for pastoralists. Africa's burgeoning cities are a reliable market for meat, milk and other products. Many countries with pastoralist



*Supermarket chains have strict quality requirements.*

populations do not produce enough animal products to satisfy their domestic demand, so import meat and powdered milk from abroad. There is a great deal of scope to develop marketing chains from pastoralist producers to the cities within each country. This may be less risky than trying to export to global markets, where competition is fierce and consumer standards can be fickle and costly to attain.

**Examples in this book** Eight of the 15 cases in this book deal with national markets: a reflection of their importance to the future of livestock marketing in Africa:

- **Case 1** Revitalizing agricultural/pastoral incomes and new markets project, Ethiopia
- **Case 3** Maasai Animal Health and Livestock Marketing Project, Kenya
- **Case 4** Tanzania Livestock Marketing Project, Tanzania
- **Case 5** Uganda Meat Export Development Programme, Uganda
- **Case 8** Lomidat slaughterhouse, Kenya
- **Case 10** Training strategy for a commercially viable value chain, Tanzania
- **Case 13** East Africa Dairy Development Project, Uganda
- **Case 15** Increasing the dairy potential in Say, Niger.

## Cross-border markets

National borders cut through many pastoralist areas. Most borders are invisible on the ground: the only way to tell you have crossed the border is to look at the flag flying in front of a school building, or to check the uniforms worn by the local police. There are few roads, and communications and administration are limited. Many border areas are poorly integrated with the rest of the country.

Many pastoralist groups periodically herd their animals across a national border: their wet-season grazing may be on one side, and the dry-season pastures on the other. Such transhumance involves lots of animals: in West Africa (Figure 5), more than two million cattle are thought to be driven every year to Benin, Burkina Faso, Chad, Mali and Nigeria (SWAC-OECD/ECOWAS 2008). More than a million animals move from Mauritania to Mali and Senegal – between 5 and 10% of Mauritania's total herd (IRIN 2006). In the Horn of Africa, from October to December 2011 over 350,000 animals passed through monitored border points (FSNWG 2012). Over 80% of the animals were traded informally (FEWSNET 2010). Many of the animals are taken to the ports of Djibouti, Berbera and Boosaaso, from where they are exported to Saudi Arabia and other Gulf states (Figure 6).

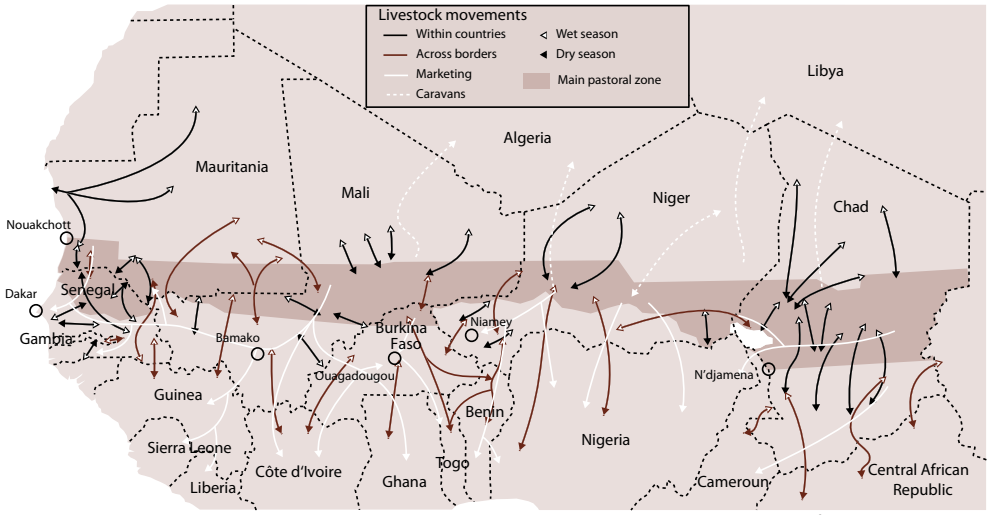
Cross-border movements are rarely captured in official statistics. There are few monitored crossing-points, and herders may prefer to avoid them anyway to escape taxes, restrictions, delays and hassle.

Many of the animals that cross a border go back again in the next seasonal migration. But many are sold. The pastoralists may have family, friends and business contacts on either side, so the opportunities for informal trade are great.

**Cross-border markets: high demand, but high risk** The high demand for meat in receiving countries is what drives the cross-border trade. But this trade is riskier than selling them inside a country. Governments frequently view it as undesirable and illegal. They attempt to curb or control it: they try to collect taxes, enforce export bans and quarantine regulations, avert conflicts between different groups, and prevent incursions by groups from the other country (Box 3). Poor transport

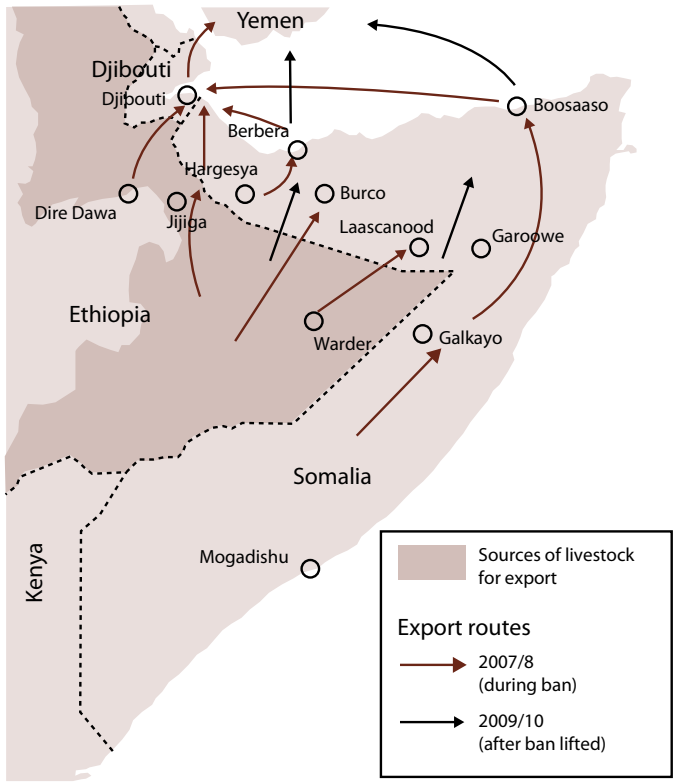







Adapted from Diop et al. 2012

*Figure 5 Transhumance routes in the Sahel*




Adapted from FEWS NET 2010

*Figure 6 Cross-border trading routes in the Horn of Africa during and after a ban on livestock imports into Saudi Arabia*

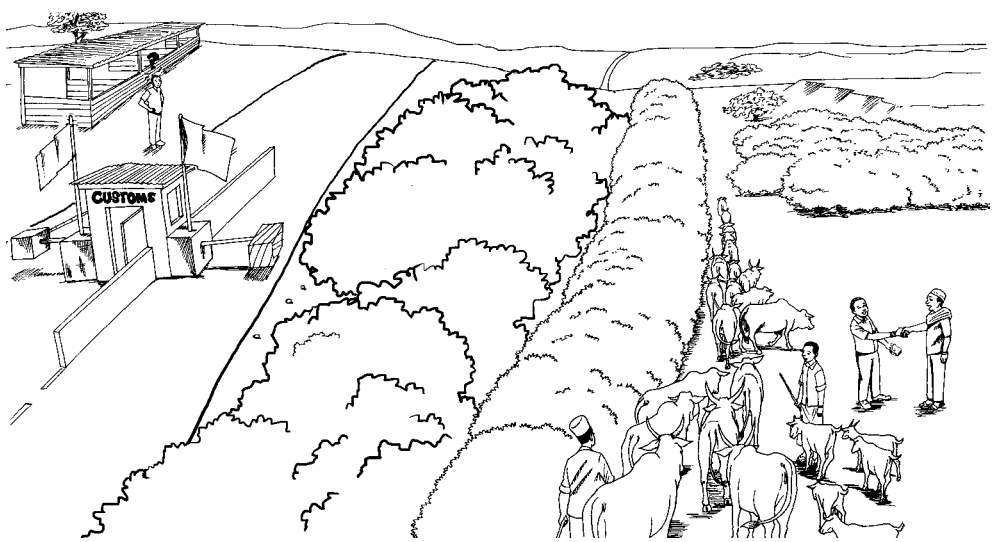
and security and informal taxes and tariffs are further problems. All these restrictions also affect the pastoralists' traditional mobility patterns, and deprive the pastoralists and many others of income.

Development organizations and some governments recognize the importance of cross-border trade. Two examples:

- **The Common Market for Eastern and Southern Africa (COMESA)** has a cross-border trade project that attempts to simplify trading across borders. It is based on the notion that greater freedom of trade helps food security. The simplified trade regime it has designed aims to make it easier for small-scale traders to take goods across borders.
- **The Economic Community of West African States (ECOWAS)** has introduced an international transhumance certificate – a type of passport for transhumant herds. This legal backing gives pastoralists confidence to move with their livestock and sell them. Similar initiatives in East Africa would ease pastoralist movement in the region.

Cross-border trade is also hampered by both formal and "informal" (illegal) taxes imposed by police, customs officials and others (Box 4).

**Examples in this book** Despite its importance, cross-border trade is difficult for donors and governments to deal with. Only one of the cases in this book attempted to do so: the Tanzania Livestock Marketing Project (Case 4). One of this project's many initiatives was to establish markets and other facilities near border-crossing points. But this aspect of the project was not very successful, due to a lack of cooperation from neighbouring countries and from the pastoralists themselves, who clearly preferred their existing informal arrangements for crossing the border.




*Many pastoralists prefer to use their traditional routes rather than go through the official border posts.*





**Box 3 Ethiopian government controls on cross-border trade**

With over 100 million animals, Ethiopia has the largest livestock population in Africa. Most belong to pastoral communities, and some 95% of the livestock for official export and meat production come from pastoral areas. Because most live in remote regions bordering neighbouring countries, pastoralists rely on informal, cross-border trade.

The government of Ethiopia recently decided to increase its earnings from livestock exports. To do this, it is trying to control the informal trade and bring it into formal channels. It has introduced new controls, such as increasing the number of customs points and patrols, and banning the trade of fodder from the highlands to pastoral areas where the cross-border trade takes place. These initiatives have adverse effects on the pastoralists and others who depend on the trade.

## Export markets

While cross-border trade is informal and deals mainly in live animals, export markets are more formal in nature and also handle meat, hides and leather goods. Where prices and conditions are right, Africa's pastoralists engage in a significant level of global trade. The major markets are South Africa (in southern Africa), the Middle East (for East Africa) and Europe.

**Meat** To serve the meat export market, pastoralists deliver live animals to an abattoir, perhaps through a chain of intermediary traders. The abattoir slaughters the animals, processes the carcasses, and chills or freezes them before shipment. Export markets demand high-quality products, and processors and exporters must be certified and subjected to strict checks. The Kenya Meat Commission is an example (Box 5).

The Middle East is the main market for live animals from Somalia and Ethiopia (see above under *Cross-border markets*). This trade has meant that over the last 30–40 years, Somali pastoralists have shifted from a subsistence livelihood in which they relied mainly on milk and meat as staple foods, along with a little grain, to a livestock export-oriented market economy with fairly sophisticated trade links.

In southern Africa, Botswana, Namibia, Swaziland and Zimbabwe have preferential chilled-beef export quotas with Europe. While commercial operations dominate this trade, pastoralists with sufficiently large herds also take part. However, these countries have failed to meet their export quotas, and despite huge investments and subsidies in intensive livestock systems, they are seeing their competitiveness in global markets erode.

**Box 4 Reducing harassment on the road between Mali and Senegal**

Livestock exporters taking animals from Mali to Senegal frequently faced harassment and complained of having to pay illegal taxes at the many checkpoints on the road between Bamako and Dakar.

The Fédération des groupements du bétail et de la viande du Mali (the Federation of Livestock and Meat Interprofessional Groups, FEBEVIM) and its partners (including SNV) investigated this issue, and prepared an information dossier for the Malian Prime Minister. The president of FEBEVIM met the Prime Minister to brief him about the situation.

As a result, the Prime Minister brought up the subject in a meeting in May 2011 with his Senegalese counterpart and the ministers of agriculture and commerce of the two countries. An agreement was reached to reduce the number of checkpoints from over 40 to just three: at Kidira (Mali), Tambacounda and Diamniandjo (both in Senegal). A special commission is charged with following up this decision.

**Box 5 Supplying the Kenya Meat Commission**

Large livestock traders in northern Kenya have signed agreements with the Kenya Meat Commission, the country's largest meat processor. They buy animals from pastoralists and supply them to the Commission's abattoir in Athi River, near Nairobi. There, the animals are kept in a holding ground for fattening until they can be slaughtered and sold on the national market or exported. This arrangement offers the producers good prices and assures the Commission a continuous supply. The Commission exports meat to the Middle East and other countries in East, Central and North Africa.

More information: www.kenyameat.co.ke

**Leather** Leather and leather goods are important sources of foreign exchange for some countries. Ethiopia's leather exports, dominated by the pastoralist sector, account for 12% of the country's total trade. Hides and skins are Uganda's fourth biggest export earner; the trade relies on pastoralists and smallholder producers for 95% of its produce (Muhereza 2004).

**Milk** Trade in pastoral dairy products rarely gets much attention, yet camel milk is an under-exploited commodity that offers great potential in both domestic and international markets. The global market for camel milk, most of which is produced in dryland areas, is estimated at $10 billion, with 200 million customers in the Arab world alone (FAO 2006). Two countries with a dominant pastoralist population and a large national camel herd, Somalia and Mauritania, have both established commercial camel milk enterprises that collect milk from fully mobile producers. Europe, the United States and Canada are big potential customers. In 2013, the European Union approved a license for importing camel milk products from the United Arab Emirates. African producers could follow suit.

**Export markets: potentially high-value, but hard to serve** Export markets typically pay more for livestock and livestock products than the other types of markets discussed here. If pastoralists can supply animals or products to the export market, they have an opportunity to make larger profits. But first they have to overcome many more hurdles than are typical for the other markets discussed above. A large number of skilled and expensive services may be required: processing, freezing, transport, certification, export handling and shipping. Finance has to be available to cover the purchasing, insurance and other costs. Importers may impose tariff and non-tariff barriers, and may ban imports altogether in response to (say) a disease outbreak.

Animals for export must be well-fed and in good condition. They must come from areas that are certified free of disease. International requirements for hygiene, sanitation and traceability are high, and they change from time to time. Bureaucracy may prove a more formidable enemy than the harsh climate where the animals are raised.

For some commodities (such as camel milk), it is difficult to get permission to export to the most lucrative markets. In the absence of veterinary care and certification agencies, it is impossible for pastoralists to prove that their animals or products comply with such requirements.

Livestock chains serving export markets usually involve more actors than those for other markets. In addition to the pastoralists, traders, abattoirs and processors, they also include exporters, plus importers, processors, wholesalers and retailers in the importing country (where costs are likely to be higher than in the country of origin). Each of these performs a function in the chain, and must cover its costs and make a profit. That pushes the end price up. Plus, exports require





an additional set of specialized services – inspection, certification, freezing, shipping, insurance, etc. – that are not needed in other chains. The costs of these services also add to the end price.

So while the customer abroad may pay more for the same product as one in the national market, the benefit does not necessarily accrue to the producer. It is swallowed up by all the intermediary links in the chain, and by the service providers that enable the chain to function. The pastoralists may in fact get little more than if their products had been sold locally. Indeed, the pastoralist may not even be aware that an animal or product is destined for a high-value foreign market.

Because of the difficulties in opening up an export market, there is a danger of becoming overdependent on a single market or customer. This market is easily disrupted, for example if a disease outbreak occurs, or if the customer chooses to source supplies from elsewhere.

**Examples in this book** Three of the cases in this book deal with export markets, all handling live animals or meat:

- **Case 3** Maasai Animal Health and Livestock Marketing Project, Kenya
- **Case 4** Tanzania Livestock Marketing Project, Tanzania
- **Case 9** Lobatse abattoir, Botswana.

Both the Kenya and Tanzania projects also targeted the national markets in their countries.

## PRODUCT AND MARKET DEVELOPMENT

We can think of four different approaches to developing products and markets. The product may be one that the pastoralists already produce (such as camel milk), or they may develop a new type of product (camel cheese). They may sell it to an existing market (such as people in the local town), or they may sell it to a new market they have not served before (consumers in the capital city). There are four possible combinations (Figure 7):

- Existing product, existing market. This is called **market penetration**.
- Existing product, new market. This is called **market development**.
- New product, existing market. This is called **product development**.
- New product, new market. This is known as **diversification**.

We briefly discuss each approach in turn. Table 2 summarizes the approaches used by the 15 cases in the book.

### Market penetration

The market penetration strategy means improving the sales of an existing product within a market that the pastoralists already serve. For most pastoralists, this means serving the local and cross-border markets. Demand is growing in both these markets as urban populations rise and become more prosperous, and people want to buy more meat and dairy products.

Market penetration was the main strategy pursued by the cases in this book: it was used by nine of the 15 cases. This reflects the relative ease and low level of risk of this strategy. Doing so means sticking with the known. Working with familiar products avoids the need to train people in completely new skills; it is possible instead to build on their existing skills and production methods. Working with an existing set of buyers also avoids having to look for new buyers in an unfamiliar environment.

The popularity of this strategy also reflects the scope for improving the efficiency of existing chains for pastoralists' products. Many such chains have serious bottlenecks: marketplaces and abattoirs are non-existent, are inefficiently run or lack suitable facilities; milk collection is slow and unhygienic; pastoralists lack the services they need to produce and market animals. By identifying and overcoming these bottlenecks, it is possible to reduce costs, improve quality, increase sales and boost profits for the pastoralists as well as for others in the marketing chain.

### Market development

Market development means taking an existing product and finding new buyers for it. This strategy was adopted by five of the 15 cases. In all five, this meant taking a product that had been marketed locally, and seeking buyers in the national market. In addition, three cases also tried to expand into markets abroad: the Maasai Animal Health and Marketing project in Kenya (Case 3), the Tanzania Livestock Marketing Project (Case 4), and the Uganda Meat Export Development Programme (Case 5). Four of the cases dealt with live animals; two (in Tanzania and Uganda) also handled meat. Only one, the dairy operation in Niger (Case 15) was concerned with milk; it developed the market for this product in Niamey, the national capital.

Box 6 gives an example of how pastoralists are supplying a traditional product (camel milk) to a new market.

Shifting from a local to a national or export market may add big hurdles to the marketing process. A significant amount of market research may be necessary: identifying and contacting a new set of potential buyers, finding out their demands, and convincing them to purchase the product. The product has to be of sufficient quality and available in suitable amounts to serve this market.

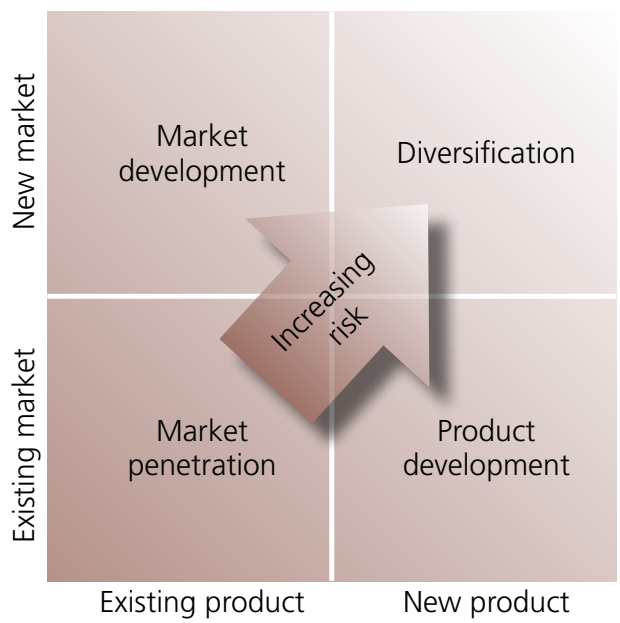



*Figure 7 The product/market matrix*





**Table 2 Market types and marketing strategies used in the cases**

| Case | Country | Product | Market type | Marketing strategy |
|---|---|---|---|---|
| **Live animals** | | | | |
| **Case 1:** Revitalizing agricultural/ pastoral incomes and new markets project | Ethiopia | Live sheep and goats | National | Market penetration |
| **Case 2:** Co-management of live-stock markets | Kenya | Live cattle, sheep and goats | Local | Market penetration |
| **Case 3:** Maasai Animal Health and Livestock Marketing Project | Kenya | Live cattle, sheep and goats | National, export | Market development |
| **Case 4:** Tanzania Livestock Market-ing Project | Tanzania | Live cattle, sheep and goats; meat | National, cross-border, export | Market development |
| **Case 5:** Uganda Meat Export Devel-opment Programme | Uganda | Live cattle, meat | National, export | Market development |
| **Case 6:** Inclusive management of cattle in Farakala | Mali | Live cattle | Local | Market penetration |
| **Case 7:** Governance and self-man-agement of cattle markets | Benin | Live cattle | Local | Market penetration |
| **Meat** | | | | |
| **Case 8:** Lomidat slaughterhouse | Kenya | Meat | National | Market development, diversification |
| **Case 9:** Lobatse abattoir | Bot-swana | Meat | Export | Market penetration |
| **Case 10:** Training strategy for a commercially viable marketing chain | Tanzania | Leather products | Local, national | Diversification |
| **Milk** | | | | |
| **Case 11:** Formalizing *faraqa annani* women's milk marketing groups | Ethiopia | Cattle milk | Local | Market penetration |
| **Case 12:** Urban camel-milk produc-tion | Ethiopia | Camel milk | Local | Market penetration |
| **Case 13:** East Africa Dairy Develop-ment Project | Uganda | Cattle milk | National | Market development |
| **Case 14:** Boosting milk production by supporting the emergence of local dairies | Burkina Faso | Cattle milk | Local | Market penetration |
| **Case 15:** Increasing the dairy poten-tial in Say | Niger | Cattle milk | National | Market penetration |

**Box 6 From Isiolo to Eastleigh: The camel milk market in Kenya**

The cool highlands around Nairobi are a big dairy production zone. Farmers there keep dairy cows, and deliver milk to several dairies in the capital.

That is not enough for the many Somali residents in the suburb of Eastleigh. They prefer the special taste of camel milk. But there are no camels anywhere near Nairobi.

That is an opportunity for camel owners around Isiolo, a town in the drylands nearly 300 km to the north. Women traders ship jerry cans full of milk on the buses that head towards Nairobi every day. Some 7,000 litres are sold a day. At KSh 200 ($2.50) per litre – more than double the price of cow milk – the trade is worth KSh 1.4 million ($16,000) a day.

More information: Abdikadir Mohamed, www.livestockcouncil.or.ke

## Product development

Product development means developing new products to serve a market that the enterprise already sells to. There is considerable potential for this. For example, pasteurizing milk, chilling it and putting it into sealed containers converts a product with a very short shelf-life (fresh, warm milk, sold from a bucket) into one that is safer and can be stored for longer. Making butter, cheese or yoghurt does the same.

Abattoirs and butchers can produce specific cuts of meat, package them hygienically and attractively, and chill or freeze them. For urban consumers that is far more attractive than traditional meat retailing (chunks hacked off a hanging carcass in an open, fly-ridden shop). Meat processors turn everything from the cow (except the moo) into saleable products: sausages, mince, burgers, meatballs, dried spicy meat (*biltong*, Box 7), deboned meat, bones packed for soup, lard, pet-food, horns, and a whole range of offal and offcuts. Tanneries convert low-value hides and skins into belts, shoes, jackets, upholstery, fly whisks (made from the tails), and many other leather goods.

Such processing raises the value of the product, reduces wastage and attracts greater income. By selling these products to an existing range of buyers, an enterprise can earn more but avoid the costs and risks of trying to enter a new market.

It can be hard to judge whether a product is in fact new. Is, for example, pasteurized milk a different product from unpasteurized milk, or merely a slight improvement on it? The consumer may not notice the difference, and may be unwilling to pay extra for the safer product. In general, it is worthwhile to invest in the additional processing needed if there is a big enough price differential (which may mean educating customers), or if there are significant other advantages (such as less wastage, or the need to comply with safety requirements).

Several of the cases in this book developed new products, but they did so mainly to serve a new market (which we classify as **diversification**, see below). None appears to have pursued product development as its major strategy in its own right – or, at least, their work in this area is not described in our brief descriptions.

This is surprising given the apparent potential for this strategy. One might expect that a customer for milk might also be interested in buying yoghurt, or someone who buys meat might want to choose mince or sausages. Perhaps the cases did in fact pursue product development, but our write-ups do not mention it.





**Box 7 *Biltong*: A new product to meet market demand**

The Lomidat slaughterhouse buys livestock from herders in Turkana in northern Kenya, and slaughters them and produces carcasses and a range of meat products. It has signed contracts to supply various distributors in Nairobi. It also advertises its products on its website.

*Biltong* is traditional dried meat known as *ngatosa* among the Turkana community. It is a way of preserving meat, especially during drought when the animals are dying. Lomidat has modernized *biltong* production by introducing protected drying cages, specialized meat striping and marinating. The drying cages are protected and cutting done in a special room using modern technology. The slivers of meat are then sun-dried to produce a unique flavour.

This product has gained popularity in Turkana and with many Kenyans and foreigners.

More information: Case 8; www.lomidatmeat.co.ke

## Diversification

Diversification involves developing a new product at the same time as seeking a new market for it. It was used in two of the cases: the Lomidat slaughterhouse in Kenya (Box 7) and the tanneries project in Tanzania (Case 10). In both instances, the projects aimed to produce new products (meat, meat products, leather goods). They both sold to a new (for them) market: buyers in Nairobi in the Lomidat case; the local and national markets for the tanneries.

Diversification is the riskiest, highest-cost strategy because it means developing new products and opening new markets at the same time. That may be inevitable for some new products: there

*Market research is important to understand where and to whom pastoralists might sell their products.*

**Box 8 Camel milk: A niche product**

Camel milk is reputed to have a number of beneficial characteristics. It is rich on non-saturated fatty acids, iron, Vitamins B and C. Though it contains lactose, it is a valuable alternative for people who are allergic to cow's milk. It may also have benefits for people suffering from diabetes, high blood pressure, arteriosclerosis and osteoporosis, and those recovering from tuberculosis.

Vital Camel Milk Ltd., a dairy based in Nanyuki, Kenya, sells pasteurized milk, sour milk, and various flavours of yoghurt and milk ice. These products are available in Nakumatt and Uchumi, two Kenyan supermarket chains, and in specialized shops in Nairobi and other major towns in Kenya. They are also exported to South Africa.

Supplying products to these outlets requires an emphasis on hygiene and quality, high-quality packaging, and barcoding according to the Ministry of Trade's specifications.

More information: Vital Camel Milk Ltd., www.vitalcamelmilk.com

may be insufficient demand in an existing market to justify investing in new processing equipment, for example. Set up an abattoir or a big dairy to tap into the local supply of animals or milk, and it automatically means seeking out a new, more distant market.

Because it requires special expertise and significant investment, diversification is not something that pastoralists can easily do themselves. The tanneries in Tanzania (Case 10) are an example: establishing them required training the workers in a whole new set of skills, providing them with start-up capital, and helping them with marketing.

### Mass vs niche markets

Pastoralist marketing chains may be oriented towards two different types of market: mass or niche. A **mass market** is one where the identity and particular qualities of the product are not important. Go into a supermarket, for example, and pick up a packet of milk, and you are probably not interested in where the milk came from or who produced it. Any litre of milk is just like any other. Similarly with meat in the butcher's: you want to buy beef. Any beef will do, as long as it is acceptable quality and the price is right.

**Niche markets** are the opposite of mass markets. Here, the product stands out because of its particular qualities or features. Examples are spicy sausages that are specialties of a region, cheese made from camel milk, and a Louis Vuitton leather belt. Consumers like these items because of their taste, appearance, high quality and prestige, and because they are different: they are not mass products.

Most pastoralists serve mass markets. Their animals and milk are not distinguished in any way from products from other sources. Often they come in at the lower end of the quality and price range, for the reasons outlined in Chapter 2. Production costs and risks are low, but so are profits.

But pastoralism also offers opportunities for niche marketing. The animals are raised on grass with few or no external inputs. The meat has different qualities from that produced by stall-fed animals raised on concentrates. That opens up the possibility for organic certification or marketing under a special label such as "range-fed". Pastoralists produce unique products, such as camel milk, which is reputed to have medicinal benefits (Box 8). New products could be developed: a dairy in Mauritania has developed camel cheese (LPP et al. 2010). In Kenya, groups such as the Maasai have a strong visual image, which is much used to promote tourism and to sell handicrafts. Such






*Camel milk: A niche product with huge potential.*

branding could also be used to sell livestock products. Such opportunities have been little explored so far. They would require high quality and clever marketing (both of which are expensive), but bigger potential benefits for producers and others in the marketing chain.

# 4 Production inputs

Markets require healthy and well-fed animals to fetch good prices. To produce high quality products regularly, an animal needs a steady supply of fodder, vaccines and other inputs. If it gets sick or hungry, its production will drop, and its marketability will be reduced. If it dies, it is a total loss for its owner.

Pastoralists who want to produce for markets have a number of options. They can provide their animals with more and better feed and veterinary care, keep more animals, switch breeds, or any combination of these. All of these scenarios require some change – access to more grazing land if pastoralists want to keep more animals; changes in feeding, healthcare and perhaps breeds if they want to intensify production. Governments in sub-Saharan Africa tend to favour the second option. Most governments also want to reduce herd sizes: land is getting scarce and more valuable, and officials still think of pastoral production as degrading the land – despite recent findings to the contrary. Not all countries are set on destocking, though: Mali is considering increasing its national herd.

The type and level of feed, drugs and breeds required for livestock marketing depend on the level of market orientation and the production system. The more intensive a system, the more inputs it needs. Location and environment also play a role: pastoral systems in remote and harsh environments are difficult to improve and intensify. Pastoralists are excellent livestock raisers, and their breeds and systems are extremely well adapted to their challenging environment.

Production inputs for livestock marketing need to meet the following goals:

- Keep animals healthy and prevent disease spread.
- Maintain and improve the output of meat and milk.
- Facilitate the production of safe, quality products.
- Meet consumer demands and comply with legal requirements.
- Avoid negative impacts on the environment.

While these principles are true for all livestock producers, pastoralists require different inputs and ways to deliver them from (say) farmers living near a big city. This chapter discusses three types of inputs: animal health, feeding, and breeds and breeding. Often a combination is needed: improving a breed, for example, will not yield more milk unless it goes hand-in-hand with better feeding and health care.

This chapter does not try to be a comprehensive summary of efforts to improve pastoralist production. We focus instead on those aspects that have a clear impact on marketing.

## ANIMAL HEALTH

Animal health problems hamper livestock marketing for four reasons:

- **They reduce production** Sick animals grow more slowly, produce less milk and meat, get weak and may die.
- **They raise costs** Keeping animals healthy with vaccinations and dipping costs money. Treating sick animals with commercial medicines costs even more.
- **They cut market value** Even if a sick animal recovers fully, it is likely to be smaller than its age-mates. It will be graded lower, and fetch a lower price.
- **They can eliminate markets** Substandard animals and contaminated milk are likely to be rejected at some stage in the marketing chain: by a trader, the dairy or abattoir, or the importing country.

### Health problems

The three main types of health problems affecting pastoralist livestock are weakness due to a lack of feed and water, parasites, and infectious diseases. These problems are interrelated: many parasites carry infectious diseases, and hungry animals are prone to fall ill.

**Lack of feed and water** This is especially serious during drought, when rangelands have little to offer in the way of grass, browse or water. We discuss this below in the section on *Feeding*.

**Parasites** Internal parasites (such as intestinal worms and liver flukes) and external parasites (ticks and biting flies) weaken animals, can carry diseases, and reduce the value of meat and hides. Pastoralists try to avoid them, for example, by keeping clear of areas infested with tsetse flies (which carry trypanosomiasis, or sleeping sickness), and by moving animals around (which prevents the build-up of parasite numbers). Internal parasites can be treated by "drenching" the animals (forcing them to drink a deworming medicine). Many external parasites can be treated by "dipping" (running them through a trough filled with a chemical), by spraying them, or by pouring a medicine onto their backs (the medicine spreads over their skin and kills or drives away the parasite).

**Infectious diseases** A range of infectious diseases afflicts pastoralists' livestock, cutting production and weakening and killing animals. They can have a big effect on marketing: an outbreak can trigger restrictions on livestock movements and trade, affecting a wide area and a large number of producers. Importing countries may ban shipments of any livestock products from an infected country. Such bans are immediate and have a significant effect on pastoralists, who see their market disappear overnight (Box 9). Once a ban is imposed, it can be very difficult to get it lifted, even after the initial problem has been resolved. And in the meantime, customers will have found alternative sources of supply, making it that much harder to revive the original export channels.

Some diseases are endemic; they are impossible to eradicate because wildlife act as a reservoir. This is the case for several diseases in Botswana, for example (Box 10).

Pastoralists have little influence on the presence or spread of such diseases, and they can do little to control them. Governments and international agencies respond with vaccination campaigns, quarantine requirements and restrictions on livestock movements. The most successful of these has been the eradication of rinderpest, a viral disease that devastated herds across much of Africa. Following a sustained vaccination campaign, the disease was declared eradicated worldwide in 2011.





**Box 9 The effect of import bans**

**Livestock exports to Saudi Arabia from the Horn of Africa**

In the year 2000, Saudi Arabia imposed an import ban on all livestock and livestock products from the Horn of Africa because of an outbreak of Rift Valley Fever in the region. The ban lasted until September 2009. This led to reduced prices and affected the local economy in the Horn. Many poor pastoralists and traders migrated to urban areas, where most lack the skills necessary to get a job. Poverty and unemployment increased. When the ban was lifted, the demand for export-quality meat increased. Prices went up, and pastoralists' income improved (see also Figure 6 in Chapter 3).

**Beef exports to the European Union from Botswana**

Botswana depends on the export market for its beef, especially to the European Union. Whenever there is an outbreak of disease such as foot-and-mouth disease, exports stop. The domestic market is limited. Other products produced at the time of the ban cannot be sold.

More information: Fews Net 2010 (Horn of Africa); Case 9 (Botswana)

**Box 10 Restrictions on cattle movements and trade in Botswana**

Livestock diseases such as foot-and-mouth disease and contagious bovine pleuropneumonia are endemic in parts of Botswana because buffaloes and other wildlife act as carriers. Cattle from these areas may not be taken out of this area, and the meat must be consumed locally. A special slaughter-house handles these animals.

More information: Anthony Macharia

Such campaigns may be in the longer-term interests of pastoralists (or at least, of those who are able to get their herds recognized as disease-free), but hamper movement and trade in the short term. They are a huge impediment for those herders who are unfortunate enough to live in areas not designated as disease-free.

### Animal health-care services

Four groups provide animal-health services in pastoral areas: the government, non-government organizations, pastoralists themselves, and the private sector.

**Governments** used to be important providers of animal health-care services: they employed veterinarians and livestock extension workers to provide preventive and curative treatment, advise on health and production, monitor diseases and ensure product quality and safety. But such staff were never numerous in pastoralist areas, and the restructuring of government services means that now most of the few remaining staff focus on disease surveillance and quality and safety issues.

Remote rangelands are unattractive postings for professionals, and government staff tend to have limited budgets for transport, so are tied to their health posts. That is of little use in areas where most of the herders move from place to place in search of pasture.

**Box 11 Drugs from "moving tables" in Tanzania**

Pastoralists in Tanzania are nearly always on the move with their animals, so they have few opportunities to go shopping. Their chance to buy general goods, including veterinary drugs and supplies, is livestock market day. Private traders display their drugs on "moving tables" – cloths spread on the ground under a shade tree. These entrepreneurs move from one market to another. Before the start of the market, pastoralists order the medicines they need from the trader. If they earn enough from selling animals, they can pay the trader. If not, the trader normally provides the drugs on credit; the pastoralist promises to pay at the next market.

But there is a legal problem with this arrangement: in Tanzania veterinary pharmaceuticals may be sold only from a fixed location. Moving from market to market is, strictly speaking, illegal.

More information: Jeremiah Temu

**Non-government organizations** (NGOs) and development projects have filled some of the gap left by the withdrawal of government services. While staff are likely to be well-qualified and highly motivated, they are dependent on short-term project funding, so such services are unsustainable in the long term.

Many NGOs and development projects have trained community animal-health workers (sometimes known by the unfortunate acronym CAHWs, which is pronounced "cows"). In many such schemes, these workers are supposed to charge for their services and for the drugs they provide. The intention is that they can make enough money to cover their transport costs, buy new supplies and equipment, and earn a profit.

**The private sector** offers veterinary services and sells drugs and equipment. Many towns in pastoralist areas have "agrovet" stores that sell drugs and equipment, and that provide advice to livestock keepers. They are often run by the few private veterinarians to be found in pastoralist areas. Small-scale traders also sell drugs at markets (Box 11).

**Pastoralists** deal with many disease problems themselves using a combination of modern treatments and their own centuries-old health care and management approaches. But since colonial times, such "ethnoveterinary" practices have been branded as "useless" and as "witchcraft". Many young people are no longer familiar with the approaches of their parents and grandparents (Box 12). Interest in ethnoveterinary medicine has grown substantially over the past decades, but it still has to gain widespread acceptance, and is only rarely used in development projects.





**Box 12 Pastoralists' ethnoveterinary knowledge is disappearing**

Your best milking cow is ill, but you are miles from the nearest road. Anyway, you have no money to buy drugs. What do you do?

You search for a particular plant, pound the seeds into a paste, mix it with water, and force the animal to drink it. You learned about this plant from your mother, and she learned it in turn from her mother.

Through observation, trial and error, pastoralists have over centuries developed many ways to prevent their animals from falling ill and restore them to health. Some of these "ethnoveterinary" practices are, to modern eyes, strange and are unlikely to be effective. But some do in fact work, and for certain conditions they can be cost-effective alternatives or complements to modern treatments. If a pastoralist cannot find a veterinarian or afford drugs (which is most of the time), they may be the only option if an animal falls ill.

Ethnoveterinary treatments have disadvantages: they are often cumbersome to prepare, and the ingredients may be out of season or hard to find. Such practices tend to be regarded as obsolete or are branded as witchcraft, so they are becoming disused and forgotten. Pastoralists are left with nothing if they cannot get modern drugs, or if the drugs do not work.

More information: ITDG and IIRR (1996)

## Drug availability and quality

Pastoralists can find commercial drugs in agrovet shops and markets (Box 11). So the main problem is not necessarily drug availability. Rather, it is the low quality of the drugs. The sellers are frequently untrained, and the drugs may be expired, diluted or fake. Some medicines are repackaged and sold in small portions without printed instructions. Even if the instructions are included, they may be incomprehensible to ordinary people or illiterate herders. As a result, drugs are frequently used at the wrong dosages or to treat the wrong diseases. The animals fail to recover, and disease-causing organisms evolve resistance to the drugs. If the owner sells a sick animal, it is likely to fetch a low price and may pose a risk to consumers from the disease or drug residues.

Negative experiences with failing drugs reduce pastoralists' trust in the system, so they do not invest in animal health care. Agrovet stores do not invest in quality products, and a vicious circle ensues, curbing attempts to stimulate marketing.

To overcome the problems with drug and service supply in pastoral areas, governments and NGOs have been turning to donors for funding to distribute medicines and services for free or at reduced prices. But free services are usually short-lived and do not provide pastoralists with reliable animal health care in the long-term. And as pastoralists come to expect such freebies, they are reluctant to pay the full cost of medicines and services. That makes it harder for private businesses to make a profit from animal health services.

## Enhancing private sector involvement

Many recent approaches to improve animal health-care services in pastoralist areas aim to stimulate the private sector: community animal health workers, private veterinarians and veterinary pharmacies. The idea is to give them the skills, linkages and financial motivation they need to provide such services, and to keep providing them into the future. The more they sell and the more services they provide, the more money they make. If things run well, their services will eventually pay for themselves, leading to a strong, sustainable animal health system in pastoralist areas.

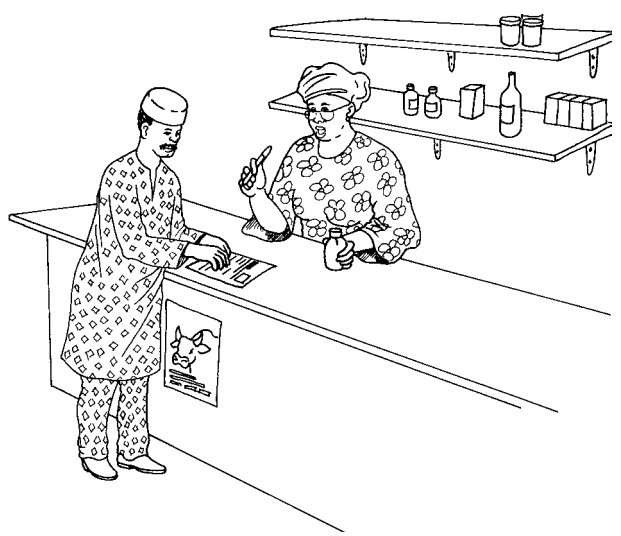
The following sections show how projects have helped private-sector providers recognize opportunities and improve their services and inputs, in turn enabling pastoralists to boost their milk production and sell better-fed animals for slaughter. A common element in many of these projects is the linking of stakeholder groups. The make-up and complexity of set-ups vary from individual providers to integrated service hubs; some offer feed and other inputs beside drugs and animal health services. Many of the projects also build the capacity of pastoralists in some form or other. Government veterinarians can be involved among the providers, but they frequently have supervisory functions.

## Making private veterinary pharmacies more efficient

Private veterinary pharmacies may not be aware of the range of drug wholesalers they can buy from. When they depend on a single wholesaler, they are forced to pay the prices the wholesaler asks, or turn to the black market. They also may not be aware of the spectrum of drugs available on the market. Exposing private veterinary pharmacies to a wider range of choices can create competition on the wholesale market. The pharmacies can compare prices, get better deals and improve the range of goods they can offer to the pastoralists (Box 13).

## Linking community animal health workers with drug suppliers

Since the 1970s, projects and NGOs have trained pastoralists as animal health workers. As these come from and usually stay with communities, they know what their peers need and where the



*As pastoralists market more animals, animal health services become more important.*





**Box 13 Enhancing choices for private veterinary pharmacies in Ethiopia**

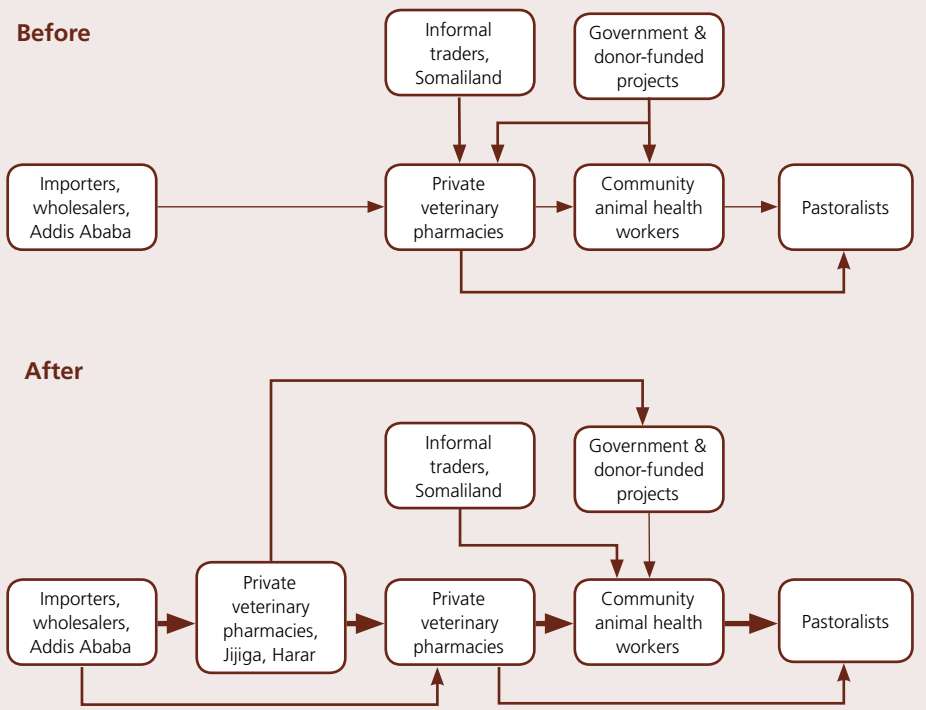
Veterinary pharmacies in the Somali Region of Ethiopia used to get most of their supplies from informal traders in Somaliland, as well as from development projects, and from wholesalers in Addis Ababa.

A Mercy Corps programme called Revitalizing Agricultural/Pastoral Incomes and New Markets (RAIN) brought managers of these pharmacies together with veterinary input wholesalers from nearby cities. The programme took both groups to Addis Ababa to meet suppliers and see the range of animal-health products available. The pharmacy managers realized they had more options for buying their drugs. As a result, they now get up-to-date information and better quality drugs at competitive prices. Plus, they acquire the drugs legally – before, they had mainly bought from the black market.

The RAIN programme also made a concerted effort to link animal health workers to private veterinary pharmacies. It invited pharmacists to help train the animal health workers, and to serve as ongoing sources of information about the drugs and services they had on offer. Appreciating that this would lead to better business and more income, the pharmacists agreed to give the animal health workers a discount on their products.

The end-customers, the pastoralists, can now buy more effective drugs at cheaper prices, so they can produce and sell more milk.

More information : Emma Proud



herds are, even in remote areas. While not all countries allow this approach, it has proven an efficient way to deliver health care in remote areas. If animal health workers offer good services and quality drugs, pastoralists are more than willing to pay them. But to stay active, the workers need to be linked to private or public veterinarians and have access to a reliable drug supplier.

Input providers and pastoralists also need to understand the other's system and interests, know the range of available choices and have access to information. Mercy Corps achieved these goals by involving private veterinary pharmacies to train community animal health workers. As a result, the animal health workers got access to a reliable source of reasonably priced drugs and information.

### Training pastoralists as agrovet shopkeepers

Heifer International's Maasai Animal Health and Livestock Marketing Project went a step further. It trained pastoralists as animal health workers and as *dawa* (agrovet) shopkeepers, and helped them set up their own shops. In this way the project was able to extend health care services into more remote areas (Box 14).

### Helping pastoral organizations establish animal health-care systems

A number of projects in East and West Africa are working through pastoral associations rather than training individuals. If there are no local institutions to build on, they help pastoralists organize themselves into cooperatives or associations. The cooperatives' bargaining power enables them to buy the necessary inputs at low prices (Box 15).

### Integrating input supplies and services: Service hubs and livestock service centres

Various projects have established centres offering both inputs and services. These centres or "service hubs" are often located near milk-collection points and livestock markets, where they are well-placed to serve agropastoralists who live nearby. Because they have a fixed location, they are less well-suited to serving mobile herders from far away.


*One way to improve the availability of drugs is to help pastoralists set up their own agrovet stores.*





**Box 14 Pastoralists as agrovet shopkeepers in Kenya**

Heifer International in southern Kenya partnered with two Maasai organizations: the Loita Development Foundation and the Keekonyokie Suswa Trust. The idea was to set up *dawa* (agrovet) shops in the pastoralists' home areas. Local young men and women were recruited and sponsored for training in animal health. Through the animal health service providers and in close collaboration with the Ministry of Livestock Development, a series of workshops were held on animal husbandry and social development. Equipped with their new knowledge and with a supply of drugs, the young Maasai were ready to operate the *dawa* shops.

More information: Case 3

**Box 15 Assisting pastoral associations to set up health care systems**

**Benin**

Many cattle from Niger, Burkina Faso and Nigeria are driven into Benin during the long dry season. They bring diseases with them, which may spread to the cattle owned by Beninois agropastoralists. The government organizes compulsory vaccinations against only two diseases, leaving animals unprotected against many other ailments.

In 2009, SNV helped the Agro-pastoralists' Association in Atacora/Donga to set up a three-person animal health team. This team partnered with two companies that sell veterinary products to offer prophylactic treatment for livestock. They taught agropastoralists how to identify diseases, treat affected herds, buy veterinary products in bulk, and monitor health operations.

In 2009 and 2010, more than 26,000 animals on nearly 600 farms were treated. That cut the agropastoralists' normal veterinary costs by half, reduced the mortality of calves from 20% to less than 1%, boosted milk production, and made huge improvements to the animals' general health.

**Burkina Faso**

In Mangodara municipality in western Burkina Faso, SNV helped the local breeders' union link with private veterinarians and local livestock ministry officials to deal with animal health issues. The union and local officials have set up four outlets to sell drugs, resulting in an increase in the number of animals treated from 17,000 in 2010 to 23,000 in 2011.

**Uganda**

Meat producer cooperatives in Uganda have formed an umbrella cooperative that sources inputs and hires veterinary personnel to provide technical know-how to agro-pastoralists. Every member contributes a modest payment for this service.

More information: Albert Houedassou (Benin), Ouedraogo Tipoco Brigitte (Burkina Faso), Joshua Waiswa (Uganda)

**Box 16 Business development service hubs in East Africa**

In Kenya, Uganda and Rwanda, limited access to agricultural inputs and services constrains milk production and productivity. The East African Dairy Development Project helped smallholder dairy farmers and agro-pastoralists to establish hubs for business development and agricultural advisory services managed by farmer cooperatives.

The project mobilized milk producers and helped them register as dairy cooperatives. These co-operatives signed contracts with agricultural advisory services and input suppliers so their members could get services on credit. The cooperatives handle milk sales: they pay the advisory services and suppliers, deducting the cost from the amount paid to the producers.

This arrangement became known as the "hub model". By the end of 2011, it covered over 750 extension advisors, 535 animal health workers, 320 insemination technicians and 109 agrovet shops. It enables many milk producers to get inputs and services such as animal health, artificial insemination, feeds and feeding regimes, training and financial services. It has built an efficient marketing chain that has transformed the lives of farmers and created a vibrant dairy industry.

More information: Case 13

**Box 17 Sidai livestock service centres in Kenya**

In dry parts of Kenya, an innovative franchise chain called Sidai Africa Ltd was established in 2011 to provide quality animal health services and inputs to pastoralists. Sidai, which means "something good" in the Maasai language, was started with support from FARM Africa, but operates as commercial company. Its franchisees offer a range of services, including artificial insemination, training in feeding and management, vaccination and disease control, and advice on livestock, feed and milk production. It has a strong, easily recognized brand and currently has 38 outlets throughout Kenya serving 60,000 customers. It aims to expand to 150 outlets by 2015.

More information: www.sidai.com

Some hub models put more emphasis on building the capacity of pastoralists' organizations, while others focus on enabling livestock specialists to serve pastoralists. A good example of the first approach is the East African Dairy Development project, which has embedded the provision of inputs and services in cooperatives and farmer organizations (Box 16).

An example of the second approach is a FARM Africa initiative in Kenya. This has established Sidai, a franchise system of retailers to sell a range of products and services. Sidai aims to set up a network of 150 franchised livestock service centres owned and managed by qualified livestock professionals. The centres are franchised out to vets or other qualified livestock specialists, who are then trained and supported by FARM Africa (Box 17).

### Recommendations and lessons

- New approaches in animal health need to draw on and enhance the involvement of the private sector.
- Private drug suppliers and service providers need incentives. Building their capacity and linking them with wholesalers and pastoralists can help them to provide appropriate services and earn more, thus making it more attractive for them to work and invest in pastoral areas.





- Building the capacity of pastoralists and helping them to organize themselves in producer groups and cooperatives can give them access to better and cheaper inputs and services, and can enhance their bargaining power.
- The more mobile the pastoralists, the more mobile and flexible the services need to be. In very remote areas and where national law allows, useful approaches include using pastoralists as community animal health workers, and building on their ethnoveterinary knowledge.
- To avoid drug abuse and malpractice, public-sector functions such as ensuring drug safety and disease control need to be strengthened.

## FEEDING

More than 95% of the animals sold in the livestock markets in sub-Saharan Africa are raised on rangelands. Pastoralism uses land unsuited for crops to produce meat, milk and other products.

But just because it is bad for cropping does not make a piece of land good for grazing. The biggest problem is the climate: dry seasons are long, and the wet seasons are short and unreliable. When it does come, the rain can be heavy, resulting in brief floods but adding little water to the soil. Grass and other plants grow quickly when there is water, but then lose nutrients as they dry.

Owners of livestock in intensive production systems can control how much feed their animals get, and can predict when they will be ready for market. Pastoralists have no such luxury. Their animals are unlikely to gain weight quickly, and they may lose it again during the dry season or if the rains fail. Underfed animals produce little milk and tough meat. Worse, a drought may kill large numbers of animals, destroying wealth and negating years of herding effort.

The challenge is in feeding animals throughout the year – especially in the dry season. Development initiatives, and pastoralists themselves, use a number of strategies to get livestock and products ready for market. They often build on the pastoralists' extensive knowledge of drylands and livestock production, as well as on their existing practices.

### Access to rangelands

When the grazing in an area can no longer support livestock, pastoralists need to move further away to find pasture and water. In doing so, they risk coming into conflict with other pastoral groups and with farmers. Such conflicts not only hamper migration and access to land and water; they can cost the lives of people and livestock, and restrict economic activities and trade. In conflicts with settled groups, pastoralists are almost invariably the losers: they wind up getting pushed into marginal lands far from markets and other services. While they have used the rangelands since time immemorial, the pastoralists rarely have formal rights to do so.

Efforts to guarantee and increase access to rangeland include:

- Legally safeguarding the traditional rights of pastoralists to use rangeland and watering points (Box 18).
- Conflict-mitigation and peace-building activities.
- Establishing watering points (boreholes, dams) at key locations.
- Preventing the conversion of rangeland into bush dominated by unpalatable thorny species.
- Maintaining migration corridors.
- Preventing the fencing of rangelands and their conversion to other uses.

**Box 18 Curbing conflict over land in Tanzania**

The Tanzanian government is trying to reduce conflict among pastoralists and farmers. The Villager Land Act of 1999 and the Grazing Land and Animal Feed Resources Act of 2010 emphasize proper land use plans, in which pastoralists have legal rights to graze their herds while maintaining rangeland resources by observing the carrying capacity of the land. Despite these good intentions, the laws are not always enforced.

The government also decided to parcel out to pastoralists some of the land it holds through the National Ranching Company. The company subdivided some of this land into 124 ranches of 2,000 to 5,000 hectares each, and leased them to pastoralist groups.

These initiatives have worked. When the dry season hit, pastoralists moved their livestock in search of pasture and water as usual. But this time land conflict was minimal. The pastoralists now had experience owning land and engaging in rangeland development. They knew all about constructing water-supply and disease-control infrastructure such as earthen dams, boreholes and dips. So they had an understanding of basic conservation issues and an appreciation that animal feed production and conservation could – and should – be compatible.

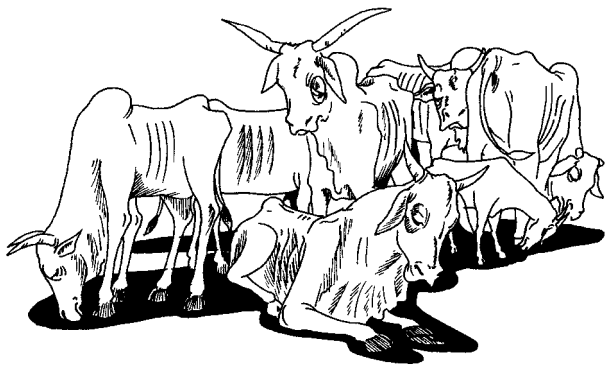
More information: Jeremiah Temu

Unfortunately such efforts are often inadequate in the face of overwhelming trends towards more restricted access. Even if pastoralists are granted legal safeguards, these are not always respected. Just because a law is on the books does not mean that it will be enforced. "Land-grabbing" is common in many areas, with cultivation expanding steadily, and rich individuals and foreign investors fencing off large areas for use as hunting reserves.

## Grazing reserves

Pastoralists use a number of techniques to ensure their herds have enough to eat in the dry season and during droughts.

**Emergency grazing areas** One of these is to maintain emergency pasture areas to be grazed only during droughts. Pastoralists have elaborate systems to regulate the use of these pastures and punish unauthorized grazing. Afar and Borana pastoralists do this in Ethiopia (IIRR et al. 2004: p. 125). In Tanzania, pastoralists have a technique called *ngitiri*, in which transhumant herds feed on standing hay, grazing in one area while other areas are held in reserve for dry-season grazing.



*Hungry, weak animals fetch low prices – if they live long enough to be sold.*





**Box 19 Animal feed reception areas for transhumant herds in Niger**

During the rainy season, Tuareg and Peulh (Fulani) camel and cattle keepers graze their animals in northern Niger. When fodder becomes scarce during the dry season, they move south for better pastures. The exact time of their movements varies from year to year depending on the duration and amount of rainfall.

Farmers in the Madaoua and Konni areas in the south of the country have started capitalizing on the pastoralists' demand for dry-season fodder. After harvesting vegetables, they grow forage on their fields. The pastoralists can buy the cut forage, or they can rent fields with standing forage to graze their livestock. This scheme has two benefits for the farmers: they can charge a considerable sum for the forage, and they get their fields fertilized for free with animal dung.

SNV is hoping to build on this local initiative in a proposed dairy project in the south and southeast of Niger. This will promote fodder crops as part of the dairy marketing chain.

More information: Saratou Malam Goni

**Grazing on fallow fields** In many regions, farmers allow pastoralists to graze their fields after the crop harvest. Both sides benefit: the pastoralists get their animals fed, and the farmers get their fields fertilized.

Perhaps the most spectacular example of this practice is in the vast floodplains of the Inner Niger Delta of Mali. Each year, Peulh pastoralists bring their animals to graze on the *bourgou* (*Echinochloa stagnina*) grass and fallow rice fields. Hundreds of thousands of cattle, sheep and goats descend from the dry plateaus on either side of the Delta to graze on this bounty. A ceremony to mark the annual crossing of the river at the town of Diafarabé has been recognized by Unesco as a world cultural heritage. The animals leave again at the beginning of the rainy season, when it is time for the farmers to plant their crops.

**Specially planted forage** As access to land becomes tighter, farmers have started taking advantage of the high fodder needs of pastoralists during the dry season. The farmers have established "animal feed reception areas" where they grow forage on their harvested fields rather than leaving them idle. A dairy marketing project in Niger plans to build on this trend (Box 19). Pastoral field schools in Kenya teach herders how to sow grasses and make hay (Box 20). And an SNV project in Mali is helping agropastoralists plant cowpea and stylo (Box 21).

*Maintaining access to rangelands is vital for pastoralists.*

**Box 20 Pastoral field schools in Turkana and Pokot counties, Kenya**

What to do about deteriorating pasture in parts of Turkana and Pokot counties? Terra Nuova and Vétérinaires Sans Frontières-Belgium worked with the Lomidat slaughterhouse to promote fodder production. These organizations ran field schools where pastoralists learned how to grow various native grasses: *Cenchrus ciliaris*, *Chrysopogon plumulosus*, *Cymbopogon* sp., *Enteropogon macrostachyus*, *Sehima nervosum* and *Eragrostis superba*.

The initiative built fodder banks and started a programme of seed multiplication. The seeds were harvested and the field school participants learned how to make hay bales.

Seeds were harvested from the plots and sown in a new location (the original plots also regenerate). Repeating this process expands the area sown with these grasses. Areas planted so far include Naweregai, Kapelbok, Lorus, Riokomor, Pokot Central, Amolem and Termach.

More information: Sylvester Nyadero

**Box 21 Growing forage in Sikasso, Mali**

Since 2010, SNV has been helping the Union Régionale de la Filière Bétail et Viande (the regional meat and livestock industry union) in Mali to produce forage crops to help tide agropastoralists over the dry season. As part of the Projet d'Appui à la Productivité de l'Élevage (Livestock Productivity Support Project), SNV helped train 40 agropastoralists and provided each of them with a starter pack of 1.2 kg of cowpea seed, and some fertilizer and pesticides. These producers produced over a tonne of seed, which they sold back to the union, then repaid the cost of the inputs.

In the following year, the animal production regional directorate trained a further 120 agropastoralists to produce seed of cowpea and stylo. Each grower sows one-tenth of a hectare of the forage, producing up to 60 kg of seed. The dried stems and pods can be stored and used as fodder.

Agropastoralists across the area have now adopted this fodder-growing practice. The union has a reliable supply of fodder seed that it can sell to its members.

More information: Bonaventure Dakouo

## Splitting herds

Another technique pastoralists use to cope with dry-season fodder shortages is to split their herds. The bulk of the herd migrates in search of greener pastures, while sick animals and lactating cows and their calves stay near the homestead and get special fodder.

Nowadays pastoralists use this technique to supply urban milk markets. In Niger, for example, some pastoralists have moved part of their milking herd close to Niamey, the capital, while the rest of the herd grazes in the rangelands. The owners of the urban camels in Ethiopia (Case 12) use a similar tactic: the milking animals are brought into town so they can be near the market, while the rest of the herd is kept in the traditional pasturelands.

## Growing and conserving forage

**Growing forage** Rather than relying on others to grow forage crops, agropastoralists can plant their own. Pastoral field schools are a useful way to teach people how to build up a seed bank, seed pastures and grow forage crops (Boxes 20 and 21). These "schools" take place in the field;





**Box 22 Teaching pastoralists to make hay and silage in Niger**

In the Sahelian countries the rainy season lasts only three months, so in many areas pastoralists struggle to feed their animals through the dry season.

GAJEL Sudu Baba is an association of young pastoralists formed in 2009. The name is most appropriate: GAJEL is an abbreviation for *Groupement d'action culturelle et de développement des jeunes éleveurs*, or "group for cultural action and development of young livestock keepers". *Sudu baba* is a Peul term for a family home where the whole community can enter.

GAJEL Sudu Baba asked SNV to train 17 trainers how to produce and conserve forage (things like periodic cutting, drying times and storage conditions) and how to make feed supplements. The training consisted of lectures, practical sessions, demonstrations and monitoring.

As a result of the training, the association members stockpiled more than 18,000 bales (about 90 tons) of high-quality fodder in three locations. This made it possible to sell quality animals at various markets for good prices.

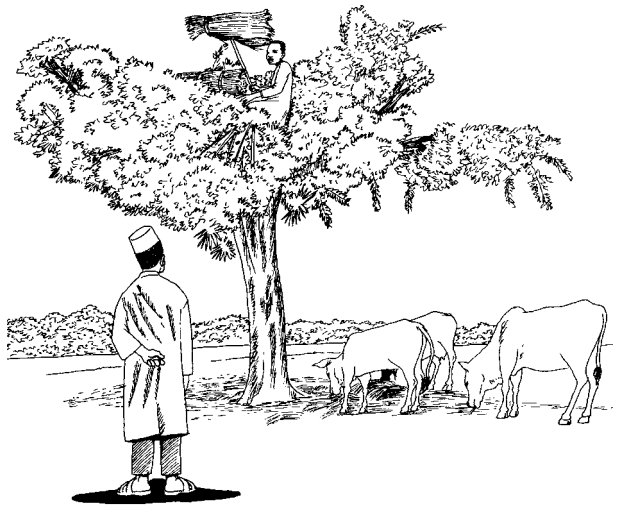
More information: Saratou Malam Goni

they offer hands-on training so participants get practical experience with the subject and bring in and exchange their own knowledge and experience.

**Making hay and silage** Grass and other forage crops can be cut and dried for long-term storage. Where there are no giraffes, as in Niger, hay bales can be stored in trees (Box 22). Another way to conserve forage is to shred it, pack it densely in a pit, and cover it to seal it off from oxygen. It will then ferment into silage.

## Supplementary feeding

Supplementary feeding can help to get at least part of a herd through a drought. Feeding concentrates for a few months can be far more cost-effective than destocking (selling off animals) and restocking (getting new ones) after the drought. Other situations requiring supplementary



*A traditional way to store valuable fodder: put it in a tree.*

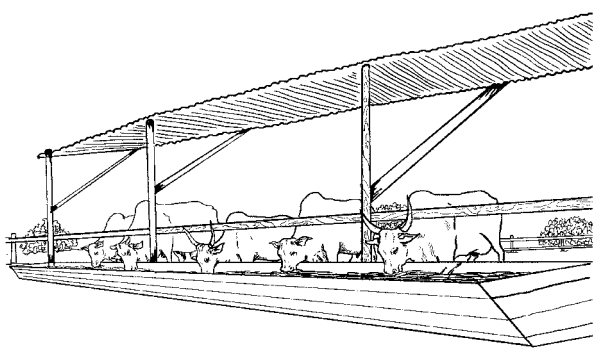
*One way to conserve forage is to put it in a sealed pit.*

feeding are to maintain milk production in dairy enterprises, and to fatten animals that are going for slaughter.

**Feed markets** Getting commercial fodder, crop stover, mineral licks and agro-industrial products such as oil cakes and bran in pastoral areas can be difficult. Private-sector feed traders exist in cities and where infrastructure allows. The service hubs and livestock centres (see above under *Animal health*) also sell livestock feeds. But in some countries it is difficult for feed providers to get supplies as shipments from areas with surpluses may be banned. In Ethiopia, for example, it is not allowed to bring fodder from the productive highlands to the dry lowlands where more pastoralists live. In Botswana, where livestock diseases are a concern, the government limits cross-border mobility and the transportation of livestock feed.

**Responding to emergencies** In the past, emergency response projects commonly brought in fodder from the outside. But this distorts local feed markets. To reduce such distortions, new approaches source supplemental feeds from local vendors (Box 23).

**Fodder blocks** FAO has developed a method to produce lick blocks made of molasses, urea and salt. These blocks provide some of the energy, nitrogen, minerals and vitamins that animals



*Feedlots can be used to fatten animals before slaughter.*





**Box 23 Supplementary feeding using private-sector feed vendors in Niger**

Mercy Corps' PASTORAL II programme in Niger aimed to improve the food security of over 4,000 agropastoralist and pastoralist households in the Filingué department of Niger. Part of it is a voucher scheme that enables the pastoralists to buy supplementary feed for their core breeding stock during a drought.

Mercy Corps and the government extension services identified 12 feed vendors in the department. It conducted a market assessment of these vendors, to check each one's stock, prices, level of business, supply mechanisms, financial capacity, and experience with NGOs. It organized a meeting with all 12 vendors to introduce and explain the intended voucher process. This meeting agreed on feed prices (i.e., the value of the vouchers) to avoid price fluctuations and speculation.

Out of the twelve vendors, six met the criteria and were selected to participate in the voucher system. Vouchers were distributed to over 2,700 pastoralist and agropastoralist households. They could exchange them for supplementary feed at the approved vendors. As a result, over 400 tonnes of feed was distributed to 2,700+ head of cattle over a 60-day period.

This project showed that private-sector vendors can be used in an emergency response to drought. Doing so is faster than usual procurement procedures, and does not distort the local market.

More information: Emma Proud

**Box 24 Molasses-urea blocks to overcome dry-season feed shortages in Ethiopia**

Consumers in the Middle East prefer meat from Ethiopia's Afar region, an arid area inhabited by nomadic pastoralists. But the harsh climate in this area means there is little feed, and animals often lose weight or die before they can be brought to market.

No commercial supplier of feed supplements operates in the area, so an FAO project helped set up a local group to make multi-nutrient molasses-urea feed blocks. These are nutritious and easy to transport. They are made at a feed-processing unit established by the project for jobless local people. The project trained the group how to make blocks and to manage a cooperative.

The group now supplies pastoralists with quality feed supplements, reducing the severity of feed shortages. While they are a convenient source of feed, the blocks are still in short supply, and some pastoralists think they are expensive. More effort is needed to popularize the technology.

More information: Binyam Kassa Engidasew

**Box 25 Choices of pastoralists who want to market their cattle in Botswana**

When pastoralists in Botswana want to sell their cattle, they have four choices:

- They can sell individual animals direct to local butchers. This is quick and easy, but the price tends to be low, and the butcher can take only a few animals.
- They can sell their animals to a company that runs a feedlot. The company fattens the animals and sells them on to the Lobatse abattoir. That gives the owner instant cash, and the feedlots will accept more animals – but they want only young cattle.
- They can pass the animals on to the manager of a feedlot near the abattoir. The feedlot fattens the animals and sells them to the abattoir on behalf of the owner. The abattoir deducts a fee per day for the feedlot, then pays the owner the remainder of the price. This gives the best price, but the owner has to wait for the money.
- They can sell direct to the Lobatse abattoir. They do this for animals that are ready for the market, and for older animals that the feedlots are not interested in.

More information: Case 9

feed on low-quality forage need. They can improve the performance of dairy and meat animals also in normal times, and help overcome dry-season feed shortages (Box 24).

**Feedlots** Feedlots are facilities where livestock can be fattened up for a few months before slaughter so that their carcasses meet market requirements. Feedlots commonly do not graze the animals but keep them in pens and feed them with fodder trucked to the facilities. Ramat Livestock Enterprises (Case 3) in Kenya runs its own feedlot. The Lobatse abattoir in Botswana works with outside feedlot operators (Box 25).

### Recommendations and lessons

Pastoralists have an array of strategies to feed their animals. Strengthening these and complementing them with appropriate new techniques can help overcome dry-season fodder shortages, help save core breeding stock, and avoid distortion of the local market. Possible measures include:

- Facilitating access to land and helping pastoralists settle conflicts.
- Teaching pastoralists how to grow and preserve forage.
- Providing seeds of locally adapted forage species to pastoralists.
- Training other community groups to produce and sell fodder supplements such as nutrient blocks.
- Sourcing supplemental feed from local vendors during emergencies.

Farmer field schools and other participatory training methods that incorporate participants' views and knowledge will help ensure that the techniques are appropriate to the local conditions.

Governments should work with pastoralists to determine the ideal number of animals for each area, and to design rules to avoid exceeding it.

## BREEDS AND BREEDING

Keeping the right breeds is important for marketing. While livestock raisers in intensive production systems are concerned primarily with production – the amount of meat or milk an animal can produce in a particular time – pastoralists are more worried about more basic questions: Can the animal survive on scrubby vegetation? Will it tolerate the many endemic pests and diseases? Can it walk long distances on stony ground? An animal that a European farmer would dismiss as too small and scrawny may have all these attributes: it will survive far better in the drylands than a prize European cow.

### Exotic vs local breeds

Many attempts have been made over the years to introduce high-yielding stock from temperate climates into traditional pastoralist systems. But few of these efforts have been successful: the exotic animals need pampering if they are to survive at all, let alone produce more than the local breeds. Pure breeds from temperate climates are mostly confined to high-potential areas, rather than the drylands. The harsher the environment, the fewer exotic stock are found in mobile pastoral herds.

Under such conditions, the pastoralists' own breeds perform much better than the imported animals. While they may produce less milk and meat than their high-yielding cousins in kinder climates, the fact remains that even when food and water are scarce they can still produce something.





**Box 26 Five cattle breeds in Niger**

In Niger, pastoralists have developed five cattle breeds to fit the conditions in different parts of the country. All five are particularly suited to zebu milk production:

- **Azawak** Probably the best milker of the five. Under good ranching conditions, it produces an average of 6–8 litres of milk a day. A lactation lasts 7–8 months, for a total output of 800–1,000 litres. It also has good zebu beef traits, with a carcass yield of 50%.
- **M'Bororo** This race is found throughout the country. It can produce an average of 3–4 litres a day, and its lactation lasts up to 6 months. M'Bororo can walk long distances.
- **Djéli** The milk output is low, about 2–3 litres per day in early lactation. Duration of lactation is 160–200 days for an average production of 400–450 litres.
- **Goudali** An excellent meat producer with three uses: milk, meat and traction. A cow produces an average of 1,000–1,100 litres in 230 days (or about 5 litres/day). The cows are very docile and easily milked.
- **Kouri** Found on the shores of Lake Chad, kouri cows produce an average of 4–6 litres a day, or 1,260 litres in 260 days.

Such breeds open up opportunities for breed improvement (see also Box 30).

More information: Saratou Malam Goni

In contrast to specialized exotic dairy or beef breeds, many local breeds are generalists: they produce milk, manure, meat and leather, and may be able to carry a load or pull a cart too. That does not mean that local breeds are all the same. They differ greatly in their production potential and other traits. Some are better milkers, others are more suitable for meat production, and still others are survival experts (Box 26).

### Crossbreeding

Pastoralists know the conditions they live in, and no one appreciates the importance of maintaining vigour and quality in animals more than they do. If they see a quality animal, they are eager to use it for breeding. Crosses with local breeds are faster-growing and better producing than the local parent, while better adapted to the local conditions than the exotic parent. Where conditions allow, pastoralists are keen on such crosses, as exotic livestock has the reputation of a "Mercedes" in livestock. In Kenya, for example, many dairy producers keep crosses with Ayrshire and Holstein-Frisian cattle.

An alternative for improving production is to introduce adapted breeds from other areas with similar climatic and environmental conditions. In fact, quite a few pastoral breeds are the result of such introductions and crosses. Boran cattle, for example, perform better than Tanzanian short-horn zebu in terms of growth, body size and milk production (Box 27). Boran is a pastoral breed from Ethiopia and has been further improved by ranchers in Kenya. Zebu-Boran crosses will produce better than the zebu parent, but may not be as tolerant when a drought strikes: they cannot realize their production potential without sufficient feed and water.

### Conserving and promoting local breeds

Development organizations have begun to appreciate that local breeds have valuable genetic characteristics and must be part of a successful breeding programme. But the spread of new breeds

**Box 27 Switching breeds in Shinyanga, Tanzania**

During the dry season of 2001, Mashishanga a pastoralist from Shinyanga, drove his herd of Tanzanian short-horn zebu to Rukwa in search of feed and water. The short-horn zebu is known for its tolerance for harsh environments (a good thing), but also for its slow growth rate, small body size, and low value (bad things).

During a visit to a ranch owned by the National Ranching Company, Mashishanga spotted a magnificent cattle breed called Boran, an indigenous breed adapted to the local environment. He wanted to know if the animals were suited to pastoral conditions. The answer was yes: provided they were dipped, de-wormed and given enough pasture, they could be raised on rangeland. He asked whether he could buy some. The answer was again yes. So Mashishanga sold off his zebus for the best price he could get, and bought a Boran bull and four cows. His friends thought he was crazy: they said he was gambling with his stock. But they also kept a watchful eye on how things went.

Fast-forward 5 years. Mashishanga's Borans were exemplary and his fellow herders were jealous. He then surprised them again by selling all 400 of his zebus to buy 100 Borans. And by coincidence, the government subdivided some of its ranches and allocated some parcels to pastoralists interested in modern livestock production. Mashishanga got a piece of land.

The moral is that pastoralists can turn animals from a cultural value into a business venture. Mashishanga's Borans weighed four times his old zebus (1 tonne as opposed to 250 kg). The animals fetch good prices, as much as TSh 1.5 million ($937), compared to TSh 350,000 ($220) for a zebu.

How is our hero doing now? He is now the proud owner of a house in Rukwa town. In August 2012 he owned 300 Boran cattle, each weighing 800–1,000 kg. When sold, each will bring in TSh 1–1.5 million ($625–937). He is improving his animals: he has bought a young Boran bull for TSh 3 million ($1,874), and had 50 cows inseminated with pure Boran semen. Mashishanga is doing well. And no-one is laughing at him any more.

More information: Jeremiah Temu

**Box 28 Animals on parade in Tanzania**

Although pastoralists are experts in traditional breeding techniques, they have little experience in modern methods. To promote breeding technology and improve husbandry, the Tanzanian government hit on the idea of an animal parade.

Every year from 1 to 8 August, Tanzanians celebrate Nane Nane, a national festival where exemplary farmers are awarded prizes. One of the most popular activities of the festival is when the best animals from each zone are paraded in front of the guest of honour. The best animals receive prizes. For the last two years, Boran bulls from the pastoralist area in Rukwa have won first prize, which comes with a cash award of TSh 10 million ($6,250). Both Rukwa Borans were sold for relatively high prices to the guest of honour. This event has promoted breeding and husbandry practices among livestock farmers throughout the country. The success of Rukwa livestock farmer has influenced their peers from other areas and many have adopted the breed.

More information: Jeremiah Temu





in pastoral areas means it is sometimes difficult to find good material of some breeds. There is a danger that the local breeds will die out and their valuable genetic resources will be lost.

**Breeding management** Strategies for controlling breeding in pastoral communities are varied because of the nature of pastoralism. Regular exchanges of animals among different communities could eliminate the problem of inbreeding, for example, but they are sometimes prevented by cultural restrictions against selling high-quality animals.

**Breeding associations** How can interest among pastoralists in their own breeds be revived? Promoting associations for local breeds (such as a Zebu breeders' association) and organizing livestock fairs can help. Associations can host competitions where livestock keepers can exhibit good animals and win prizes (Box 28). Such activities are good fun and can be wonderful morale boosters. In such activities, pastoralists must always be in the driver's seat, especially when it comes to selecting animals for breeding programmes in remote areas.

**Breeding records** Pastoralists are often able to memorize the ancestry of their animals in great detail and over several generations. Breed-improvement programmes can build on this ability and encourage pastoralists to keep written ancestry records that focus on particular pedigrees and traits. That will make it possible to improve breeding and market animals more effectively. Such systems must be simple and efficient. It is best to develop them together with the pastoralists.

**A focus on males** Much of the focus of suggested breeding interventions is on the male animals. This is because one male can mate with many females, so it can have a big influence on the type of animals in a herd. "Progeny testing" (allowing young males to mate with a few females and then testing their offspring for milk or meat production) is a good way to determine their genetic quality. The males with the best offspring are then allowed to mate with many females. If the males with good test results are owned communally, everyone in the community gains from the males' improved genetics. The other side of the coin works as well – castrating the inferior males

*Many pastoralists are eager to improve their animals through breeding.*

**Box 29 An open-nucleus breeding scheme in northern Uganda**

Maruzi Ranch, a state-owned ranch in Apac, Uganda, breeds East African zebu, a cattle type well-suited to tropical and pastoral conditions. The ranch has started a breeding scheme to serve pastoralists in northern Uganda. In this scheme, livestock keepers choose male and female animals with good genetics from their own herds and take them to the ranch, where they form a "nucleus herd". The ranch then checks the animals and selects those that have the best characteristics.

The best males are kept for breeding on the ranch; their offspring are supplied to the herders who participate in the scheme. The males that do not qualify for the nucleus herd are returned to their owners, who may use them for breeding if they wish (they have the results of the tests so know which ones are good). This approach means that improvements quickly spread throughout the herd.

This scheme is called an "open-nucleus" herd because new female animals may be added periodically to the nucleus herd. It contrasts with a "closed-nucleus" herd, in which no new animals are brought in from outside; such a herd is built up exclusively from the offspring of the original animals.

More information: Joshua Waiswa

**Box 30 Improving local cattle breeds in Niger**

Smallholder and pastoral milk production around Niamey, the Nigerien capital, relies largely on local breeds and crossbred animals. To improve dairy production, the government has set up four ranches in pastoral areas to breed purebred animals. The ranch in the village of Toukounous, for example, keeps Azawak cattle. It has over 4,000 hectares of land and a laboratory for artificial insemination. Staff select, multiply and disseminate two strains of Azawaks: milkers that produce more than 10 litres of milk per day, and beef animals which may weigh up to 600 kg.

The milkers can produce up to 15 litres of milk per day; they are the best dairy Azawaks in West Africa. The milk is sold to a milk processor in Niamey. The Association pour la rédynamisation de l'élevage au Niger (AREN) teaches its women members how to make cheese.

Pastoralists can buy improved animals from the ranch for breeding. But the animals are very expensive, so only rich farmers can afford them. Animals are sometimes also made available to poorer pastoralists.

Source: Saratou Malam Goni

or preventing them from mating stops them from passing on their undesirable characteristics to the next generation. Pastoralists themselves have a range of methods to do this.

**Open nucleus breeding programmes** These are on-farm breeding programmes that select and breed high-quality animals and multiply them for distribution to herders. Boxes 29 and 30 illustrate how such programmes operate. To speed up the breeding, such projects tend to select males based on the performance of their sisters and half-sisters (this is known as "sibling testing"). This is not as reliable as progeny testing, but is quicker, because it is not necessary to wait for the offspring to start producing milk or meat before choosing which males to use for further breeding.

Such breeding programmes should work with pastoral communities and use the pastoralists' livestock to build up the base herd. They need to carefully explain the process to the pastoralists. They should return good animals to the pastoralists as soon as possible to maintain their faith and interest. Pastoralists should help select which animals are included in the nucleus herd to make sure that the animals indeed suit their needs.





**Artificial insemination and other breeding technologies** The introduction of new breeding technologies in pastoral areas has met with even less success than the introduction of exotic breeds. Artificial insemination is a case in point. Pastoralists do not have much faith in this technology – how can you judge the quality of a bull if you cannot check it? Besides, artificial insemination requires the strict separation of breeding males from the herd – which is not always possible when a herd moves around, as it often meets other herds on its way.

Artificial insemination is also labour-intensive and needs facilities such as transport and tanks of liquid nitrogen (rare in remote areas!) to inseminate the females in the short period they are in heat. Even in developed countries, it is mostly used for dairy production and seldom for beef production on ranches. This is likely to be also the case in Africa: it will be more useful for settled agropastoralists in more favoured areas.

Some service hubs and livestock centres offer artificial insemination for dairy animals. They are sited near cities and milk-collection points, so are likely to be used on nearby herds.

Embryo transfer, in-vitro fertilization, cloning and genetic engineering are even less suitable for pastoral conditions, but may play some role in dairy production and on breeding stations. Where they are available, such breeding services are mostly undertaken by private companies and research institutions.

### Recommendations and lessons

- Local breeds are crucial to pastoral production. Any attempt to increase production through breeding needs to balance the desire for higher yields with the ability of the animals to cope with the local conditions and fulfil other needs of the pastoralists.
- Marketing efforts can make use of the differing production potentials among and within local breeds. Animals with promising characteristics can be selected and used to improve the breed. Pastoralists should be involved in choosing which breeds to improve, and in selecting which animals to use.
- Breeding projects that source animals from pastoralists and improve them on station should ensure that pastoralists can benefit from the results as quickly as possible.
- Careful crossbreeding with appropriate breeds and the introduction of adapted breeds from other dryland areas can enhance production, especially in areas with better infrastructure and conditions.
- Conserving local breeds requires policy and institutional support. When designing breeding and restocking programmes, policymakers must appreciate the value of local breeds.

# 5 Services

Any marketing system depends on a range of services that help identify a product and bring the producer together with potential customers. Livestock producers in more favoured areas can usually take such services for granted. They can deliver their animals by lorry to a nearby marketplace, where traders vie with each other to buy the best animals. Milk producers can have their milk picked up by tanker trucks each morning; it arrives in the dairy ready cooled. Abattoirs and dairies have inspectors and laboratories that check product safety and quality.

Such facilities are scarce or absent in pastoralist areas. Information about potential buyers and prices is scarce and unreliable. In the absence of roads and transport companies, animals have to be trekked rather than trucked. A lack of refrigeration means that milk that is fresh when it leaves the producer is sour by the time it arrives at its destination.

This chapter looks at six types of services that make markets tick: market information, financial services, transport, market facilities, processing plants, and controls to ensure quality. We deal with each one separately, but as with production inputs (Chapter 4), these services depend on and build on each other. An excellent transport system, for example, is of little use without good market information, well-run marketplaces and good processing facilities.

## MARKET INFORMATION

Even though they live in remote areas, pastoralists often know quite a lot about their market: they know where and how they can sell animals, who their buyers are, and the price they are likely to get. They find this out in various ways: from visitors and traders, from family and clan contacts in town, and through their own experiences of selling animals.

But until recently, such information could travel only as fast as someone can walk, and word of mouth can be unreliable. Some informants are untrustworthy: a well-informed buyer who arrives in a remote pastoralist camp is unlikely to give the current market price if he can get away with paying less.

Plus, prices are not the only information that pastoralists need if they are to market their animals and other products effectively. Are the roads safe? Will a particular trader be buying next week? Does the abattoir have a big order to fill? Is a severe drought on the way? Has the ban on exports been lifted? Does the vet store have a supply of vaccines? The answers to such questions may make the difference between a regular day's herding and a 200 km trek to the nearest market. The lack of such information substantially increases the costs of doing business and reduces market efficiency and profits.

Traders, collectors, processors, and other actors in the marketing chain also need various types of information. Some of this overlaps with the types of information that pastoralists need; some is specific. A meat processor, for example, needs to know about regulations governing meat hygiene. Because they are in towns and cities, actors further along the chain tend to be able to get information more easily than those out in the bush. For the chain to function smoothly, there has to be a level playing-field where all the chain actors have access to the information they need to make good decisions.

Ensuring a reliable supply of reliable information to pastoralist areas is difficult for various reasons:

- Many pastoralists have low levels of formal education, or are illiterate.
- Electricity, roads, telephones and internet access, which city people take for granted, are scarce in pastoralist areas.
- Collecting and disseminating information is difficult and expensive because of the remoteness and rough terrain.
- Government data systems fail to reflect a lot of the trade in pastoralist products.

### Providing market information

Various organizations provide market information to users.

**Development organizations and governments** often establish market information systems. The development organizations provide the initial expertise, but they tend to work in project mode, so phase out when the funding ends. The government provides the permanence and sustainability that such systems require. The LINKS scheme in East Africa (Box 31) is an example of this type of approach.

**Processors** may realize that it is in their interest to disseminate market information to their suppliers and customers. The Lobatse abattoir in Botswana (Case 9) is an example of this: it keeps pastoralists informed about prices, requirements, hygiene, disease control, and other topics. This helps ensure a trouble-free supply of quality animals to the abattoir.

**The media** – radio stations and mobile phone companies – may transmit the information to attract an audience (radio) or because they can charge users for it (mobile phones).

**Producers' organizations** such as cooperatives collect and disseminate information that is in their members' interests. Doing so makes membership of the organization more attractive and boosts the amount of product that the organization handles.

Various initiatives to improve access to market information services have been tried in different countries. Here we discuss the following:

- The internet and mobile phones
- Rural information centres
- Radio
- Cooperatives

### The internet and mobile phones

Internet services are improving in many areas of Africa, and in some countries mobile coverage is now widespread – though it is patchy in sparsely populated areas. Many pastoralists now carry





mobile phones: if they are within reach of a phone signal, it is easy to call their contacts in town to get the latest prices and news.

In addition, various initiatives offer services to provide such data (Box 31). Such services already exist for crops (for example, www.esoko.com), and providers are now expanding them to livestock. Most of these initiatives are fairly new, and it is unclear how successful or sustainable they will be. The main users may be traders, brokers and processors and other intermediaries rather than producers themselves. But it improves the functioning of the chain as a whole, so increases the demand for products and benefits pastoralists indirectly.

Mobile phones offer several advantages for market information systems:

- **Limited costs** Mobile phone networks and services are set up by large companies with deep pockets. Market information services can piggyback on these: they do not have to build their own infrastructure. Mobile phones are increasingly popular and widespread, even in remote areas. People buy them for their own use, so it is not necessary to spend large sums to promote them or to provide them to users. Since people readily buy airtime to use their mobile phones, the system can be designed to charge them per message. That helps cover the costs of the service.
- **The last mile** Since many people have their own phone, they get the information directly: it is not necessary to arrange for intermediaries to relay the information the "last mile" to large numbers of users.


*Pastoralists have various ways – traditional and modern – to get marketing information.*

**Box 31 Livestock Information Network and Knowledge System (LINKS) Eastern Africa**

Currently being piloted in Ethiopia, Kenya and Tanzania, LINKS provides regular information on prices and volumes for most of the major livestock markets in these countries. It also covers forage conditions, disease outbreaks, conflicts and water supplies. LINKS is an integral part of the region's early warning systems and helps to identify potentially critical food shortages.

The system collects, analyses and disseminates information needed by producers and traders. It provides market information on request almost in real time via SMS text message, email, WorldSpace radio and the internet. It combines the use of global positioning systems, mobile phones, radio, computing analysis and web-based platforms.

More information: www.lmistz.net; Global Livestock CRSP (2006)

- **Data gathering and dissemination** Mobiles can be used at both ends of the information chain. A small number of data collectors can be given smartphones to gather data on prices, etc., and transmit it to a central processing point. Regular users can receive the information via SMS either by requesting it or by subscribing to a service. They do not need a sophisticated phone to get the information.
- **Tailoring** Messages can be tailored to individual needs (unlike, say, radio broadcasts). Someone who wants information just on goat prices in the local market does not have to sift through mountains of unrelated information before finding the price of goats.
- **Structured information** Many types of market information are highly structured: prices, volumes, locations, addresses, etc., can all be stored in a database in standard formats. That makes data-processing and packaging easy.

Where information is less structured (as in extension advice), it may be necessary to have intermediaries to help people find and use it. Box 32 gives an example of one such initiative in Uganda.

### Rural information centres

Rural information centres set up in pastoralist areas can play a key role in facilitating access to information. The centres may be equipped with different communication technologies, such as community radio, satellite television, telephone and fax lines and internet service. They can offer secretarial services to the community, such as typing and printing documents, photocopying, binding, scanning, mobile money, and many others.

Major challenges in operating rural information centres are unreliable power and a population that is largely illiterate. Box 33 describes rural information resource centres set up by the Uganda Meat Producers Cooperative Union.

### Radio

Many pastoralists have radios, and listen to stations that broadcast in their own languages. Community radio stations, especially in West Africa, broadcast local news and information. Market information services can provide price and other information to such stations for broadcast. Both sides benefit: the information service gets its information disseminated at little or no cost, and the radio station offers a service that attracts listeners (Box 34).





**Box 32 Community knowledge workers improve access to agricultural information in Uganda**

They need it, but they can't get it. Information is a problem for most smallholder dairy farmers and agropastoralists in Uganda. Without it, they cannot increase production, control animal diseases or identify markets. Heifer International's East Africa Dairy Development Project, in partnership with the Grameen Foundation AppLab Uganda, trains local people to help the livestock keepers find what they need to know. These "community knowledge workers" use a smartphone application, or "app", to search for information.

A technical team has developed a growing database of extension information from agricultural research organizations and specialists. This information is reviewed by a board of experts before it is put online. The knowledge workers retrieve the information and pass it on to the livestock keepers. They also gather information on production and markets and upload it to the database. The database contains information on crops, livestock, weather, market prices, transport, input locations and mobile-money agent locations, tailored to suit the needs of smallholder dairy farmers and agropastoralists. The information is updated constantly, enabling the livestock keepers to plan and react to the challenges and opportunities they face.

More information: David Balikowa; www.ckw.applab.org/section/index; http://tinyurl.com/qcawwnh

**Box 33 Livestock marketing and resource centres in Uganda**

A feasibility study for the Uganda Meat Export Development Programme by the Ministry of Agriculture, Animal Industry and Fisheries recommended setting up livestock marketing and resource centres in producer communities. These are intended to get services closer to livestock producers and improve their ability to market their products.

Three centres have been established in the districts of Luwero, Masaka and Mbarara. A fourth one will be set up in Kitgum to serve people in the Karamoja region. The centres provide information on livestock markets, prices, demand and orders. They offer training and serve as meeting points for livestock producers. Solar panels provide electricity. The centres also offer internet access and reading materials in various languages. They are staffed by two extension workers: a veterinarian and a social worker.

The centres have help with artificial insemination services, livestock marketing and information dissemination. Some livestock keepers use them as their mailing address. The centres are owned by the Uganda Meat Producers Cooperative Union, whose members are primary cooperative societies of meat producers, mainly based in the pastoral areas of the country.

More information: Case 5

### Cooperatives

Producers' cooperatives are an important source of market information for their members. They communicate with their members through group meetings, regular interactions, and individuals who act as messengers (Box 35).

### Recommendations and lessons

Market information systems should be timely, reliable, simple and cost-effective. They should be tailored to the particular group (or groups) they are targeting, both in terms of the content of the information and the methods used to reach them. The users should be involved in the design, development and testing of the system.

**Box 34 Using community radio to disseminate market information**

**Wajir community radio, Kenya**

Livestock producers in Wajir, a dry district in northeastern Kenya, can listen to the local radio for clues on how the market in Wajir town is performing. The Kenya Livestock Marketing Council employs data monitors to collect livestock market information about prices, volumes and sales from the market.

The information is broadcast in a one-hour programme to listeners within a 60-kilometre radius. This area has a population of about 300,000 people. The programme also includes interviews with livestock producers, traders and the data monitors.

Getting information to pastoralists and traders was difficult until community radio arrived in the town. Now, the producers have improved their negotiating positions, and prices have risen. Some even call into the radio station for information.

**Community radio and mobile phones in Niger**

Vétérinaires Sans Frontières-Belgium is using a combination of mobile phones and local radio to collect and disseminate information on crop and livestock markets. This is a joint project with Telecom Without Borders (an international NGO specializing in telecommunications) and with two local market information systems focusing on crops and livestock.

The project has provided local data collectors with smartphones and has trained them how to gather information on market prices. The data collectors then transmit the data to the market information systems, which validates them before forwarding them to community radio stations for broadcast in the local language.

The system operates in the departments of Dakoro, in the centre of the country, and Say, in the west. It speeds up data collection, reduces the processing work required (as it is not necessary to retype the information), and makes the information available to users faster.

More information: Abdikadir Mohamed (Kenya); http://tinyurl.com/mzm8ugc (Niger)

**Box 35 Mobilizing suppliers for the Lomidat abattoir in Kenya**

The Lomidat Pastoral Multipurpose Co-operative Society Ltd is the body that owns the Lomidat abattoir in northern Kenya. Its members are Turkana pastoralists from all over Turkana district. As the owners of the abattoir, the cooperative and its members have an interest in supplying it with animals for slaughter.

Cooperative officials and abattoir managers travel around the district together to procure animals. They visit livestock holding-grounds and pastoralists' kraals to identify potential sellers.

The abattoir arranges to pick up animals at particular dates and locations. The cooperative lets its members know when and where these will be through its market centres, meetings called by local chiefs, and other networks. It also informs members of the current market prices.

Other traders dislike this system because the producers know what price the abattoir is willing to pay – which is often higher than the traders want to offer.

More information: Case 8





Market information systems must be designed to be sustainable. A lack of sustainability is particularly a problem with donor-funded projects. Possible sources of funding include the regular government budget, the private sector (such as via advertising), and user fees (as with mobile-phone based systems).

Market information systems should build on or complement existing and traditional systems. That makes it more likely that people will find them credible and will use them.

## FINANCIAL SERVICES

In traditional systems, pastoralists have very little need for cash. A large part of their diet is milk, butter and meat, and they make many of the things they need. Transactions are often by barter rather than cash. They swap a live animal, a pot of milk or jar of butter for items they cannot produce themselves, such as grain, clothes, sugar and tea. Agropastoralists may exchange some of the crops they grow for things they need. Beads – used in traditional jewellery – are an important medium of exchange in some areas: a pastoralist may swap some butter (which is perishable) for a bag of beads (which are not), and later exchange the beads for a sack of maize from a farmer. The farmer can then trade the beads with another pastoralist for a goat or more butter.

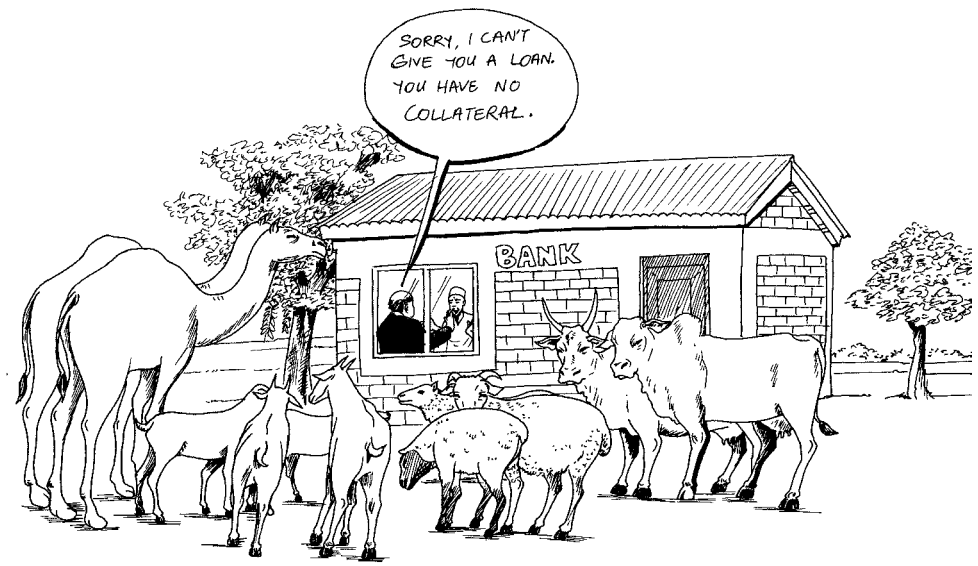
But as they enter the modern economy, pastoralists have an increasing need for money. It is hard to barter a live goat for all the things a pastoralist needs on those rare occasions he or she visits town. Plus, school administrators and tax collectors are unlikely to accept a pot of butter instead of cash.

Nevertheless, pastoralists are not necessarily "poor". Their assets are on the hoof rather than in the form of land, buildings or bank balances. Add up the net value of a pastoralist's camels, cattle, sheep and goats, and it can reach a sizeable sum. But pastoralists are understandably reluctant to convert their livestock into paper money. They look at a herd and know that if it is managed properly, it will produce enough meat and milk to support a family. And in normal conditions, a herd automatically increases in value with each new calf, kid or lamb.

Paper money, on the other hand, is hard to trust, does not increase in value, and is difficult to manage for someone who is illiterate and is unused to the cash economy. Paper money is easy to spend unwisely, easy to lose, and easy to steal. Bank accounts are even more abstract: numbers written in a book or stored in a computer are hard to appreciate. Many pastoralists prefer to save an asset they can see and control.

Nevertheless, money is vital for anything but the simplest markets to function. Interventions such as milk marketing groups and abattoirs introduce cash into the rural economy, and help people get used to this as a medium of exchange and a store of value.

Even though a pastoralist with a healthy herd is not "poor", a lack of capital can be a serious problem. A transport firm may want to be paid in cash up front to ship a load of cattle to the city where it will fetch a good price. During a drought, food and feed may be available, but only in exchange for cash: few traders want to accept a half-dead animal in exchange for a bag of maize. And it is during such times of hardship that the price of animals collapses, making the animal worth far less than it was during the rains.




*Pastoralists and traders find it hard to get loans, insurance and other financial services.*

## A lack of financial services

For most commodities, a range of financial services are needed to make production and marketing run smoothly. A crop farmer, for example, can get credit to pay for seed and fertilizer. He or she may be able to get insurance to cover the risk of production losses caused by fire, hail or other hazards. It may be possible to arrange prepayment for a crop before it is harvested. Warehouse receipt systems make it possible for farmers and traders to delay the sale of grain until the price is right (and they want to sell). The buyer can transfer the money to the farmer's bank account, avoiding the need for cash (and the risk of it getting stolen).

Livestock marketing in pastoralist areas lacks all of these services. Commercial banks find rangelands unattractive places to invest. The population is sparse, so demand is low. Why build a branch out in the bush when you can attract ten times as many customers by putting it in the city? Plus, many pastoralists have no fixed address, and may lack official documentation. Their main assets – their animals – are easy to move, so banks do not trust them as collateral for loans. Why give a loan secured on a herd of animals, if that herd may be over the border in the neighbouring country if you try to seize it when the borrower defaults? Banks like certainty – which pastoralists cannot give them. They think the risks are too high.

In addition, pastoralist areas are inherently risky because of the climate. Periodic droughts affect large areas. Large numbers of animals die and pastoralists move away in search of feed and water. Many people at the same time may be unable to repay their loans. The losses may overwhelm a lending institution.

Not surprisingly, banks in pastoralist areas are concentrated in the few towns, and their main clients are the townsfolk. Many banking services require the customer to visit the bank branch. That is easy for townspeople, but hard if your camp is several days' walk away.





Because banks do not view pastoralists as viable clients, they have developed few financial products tailored to their needs. The amounts and repayment terms of loans are designed for salaried types or urban businesspeople, or perhaps farmers who grow irrigated crops, rather than a herder who raises goats.

In both East and West Africa, many pastoralists are Muslims. But few banks offer loans and other financial products that comply with sharia (Muslim law).

Insurance faces the same problems as credit: the biggest threat is drought, which is likely to affect large areas and many animals at the same time. In order to deal with such risks, insurers would have to charge premiums at a level that few pastoralists would be willing to pay. Plus, it is much harder for an insurer to keep track of mobile animals than a fixed asset such as a building or a standing crop. Without formal insurance coverage, pastoralists prefer to handle risk in the traditional ways: moving out of drought and trouble-prone areas in search of fresh, secure grazing; and entrusting part of their herd to family members in a different area. Insurance coverage is more likely to be available for limited periods or transactions, such as to cover the transport of animals by lorry to a market.

A lack of financial services at the production end of the chain has big effects on the marketing of pastoralist products. It forces pastoralists to sell their livestock at a low price and at disadvantageous times. It makes it difficult for traders and abattoirs to get a regular supply of quality animals, and dairies have to contend with limited and fluctuating supplies of milk.

Traders face similar problems: few financial services are tailored to their needs. When they buy animals, they need to pay cash on the spot; but few traders have enough working capital to do this, and it is hard for them to get credit. That limits the number of animals they can buy at one time, so restricts the number that the pastoralists can sell to them.

Financial services further along the chain are better developed because they are similar to services needed for non-livestock products. But they can still be an impediment. Exports require a letter of credit – an assurance that the agreed sum will be paid – to be deposited with a bank. Getting such assurances can be difficult and time-consuming. The lack of a formal banking system in Somalia hinders that country's exports of livestock, its major commodity.

The situation is exacerbated by a lack of government policy to promote financial services for pastoralists. A few banks, often government-owned, do operate in rural areas, but there are few incentives for others to do so.

Nevertheless, various financial services exist that can help overcome these problems. We will focus on three:

- Money transfer
- Credit
- Insurance.

### Money transfer

Cash is wonderfully portable, but that makes it attractive to thieves. Vehicles and people who transport large amounts of cash through pastoralist areas are a popular target for bandits. A successful trip to the market can turn into a disaster if your vehicle is held up by armed men.

Pastoralists often rely on other people to deliver cash and other items to their destination. They ask a relative who is travelling to town to deliver something for them and to pick up the money.

**Box 36 M-Pesa for cash transfers**

M-Pesa is a mobile banking scheme pioneered in Kenya by Safaricom, a mobile phone provider. It allows people to deposit money with an agent (such as one of thousands of small shops that sell scratchcards for people to pay for phone calls). The customer can send a text message to the person who is to receive the money. The recipient then goes to an agent nearby with the message, and picks up the money. In some places, the M-Pesa scheme can also be used to pay bills and deposit money in a bank account.

The M-Pesa scheme has been extended to several other countries, and is expanding its range of financial services. It has also spawned various other schemes elsewhere.

More information: www.safaricom.co.ke

Drivers of buses and lorries will often do this for a small fee. This arrangement may be informal and depend on trust. But some companies have regularized this as a service they offer for a set price – a kind of bus-based courier service.

Mobile phones are revolutionizing cash transfers in rural Africa. Because mobile phones are now common in rural Africa, even in pastoralist areas, this is an important, and safe, way of transferring cash. Mobile money systems such as M-Pesa (Box 36) enable people to transfer cash securely. Even without such a system, people can transfer funds by buying airtime scratchcards and then crediting the airtime to someone else's phone. The recipient can then redeem the unused airtime for cash at a shop.

## Credit

**Chain liquidity** Actors in livestock chains find it difficult to get loans. This is especially true for the pastoralists, for the reasons described above. The most common sources of credit are their trading partners: the people to whom they sell animals or milk. Providing credit is in the interests of these buyers because they want a reliable supply of products. For example, a trader may loan money to a producer if the producer promises to sell to the trader. Similarly, an abattoir may loan funds to a trader so the trader has enough cash to buy animals and bring them to the abattoir for slaughter. Such loans made by trading partners are known as chain liquidity (Figure 8).

The Lobatse abattoir in Botswana is an example of this in action (Box 37). Because the processor knows its suppliers, it can make a better judgement of their creditworthiness than a bank

**Box 37 Chain liquidity: Loans from Lobatse in Botswana**

The Lobatse abattoir in Botswana offers three types of loans to pastoralists and other suppliers:

- Loans to feedlots so they can buy young animals for fattening.
- Loans to pastoralists to buy feed.
- Advance purchases of animals from pastoralists.

These loans ensure that the abattoir is supplied with suitable animals, and enable it to predict when and how many animals it can expect to receive.

More information: Case 9





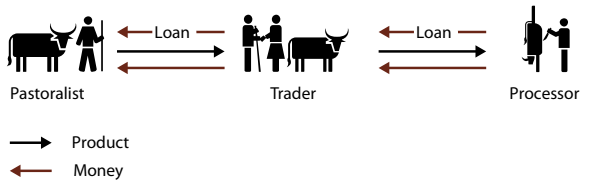



*Figure 8 Chain liquidity: loans made between actors in the marketing chain*

can. And because the suppliers want to do business with the processor in future, they are more likely to repay a loan.

**External finance** Different financial organizations tend to offer credit to different actors in the marketing chain (Figure 9): microfinance institutions serve pastoralists, cooperatives and small-scale traders, while banks offer financial services to larger traders and processors. In many cases, the private sector is reluctant to set up such schemes because of the costs and risks involved. Governments may step in with special arrangements to offer affordable loans. The Youth Enterprise Development Fund in Kenya (Box 38) is one such initiative: it loans money to Ramat Ltd., a livestock trader, which lends it on to young people so they can buy animals. The goal of such schemes is often to demonstrate to the private sector that making loans to pastoralists (and other

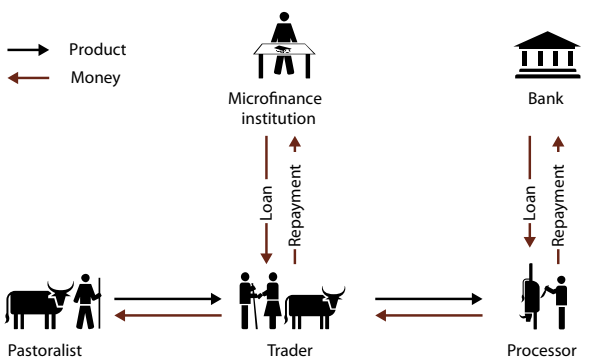



*Figure 9 External finance: credit from outside the marketing chain*

**Box 38 Supporting purchases of livestock in Kenya**

Ramat Livestock Enterprises Ltd, a community-owned trading company in Narok County, Kenya, buys animals from local Maasai pastoralists and sells them on to other traders. But it has problems sourcing enough animals from the pastoralists in the county.

Because it is well-organized and successful, Ramat has also been approached by various commercial banks and microfinance institutions. But these charge interest rates that are too high to be attractive.

The government's Youth Enterprise Development Fund has lent Ramat KSh 10 million ($115,000) – its biggest-ever loan to a community organization. Ramat lends this on to local young people so they can buy animals to supply to Ramat. The Youth Fund charges Ramat 8% interest a year; Ramat in turn charges the young people 12%. Ramat uses the 4% difference to cover the costs of running the scheme and to offset any defaults.

Everyone benefits from this scheme: pastoralists sell more animals; the young people can earn money and learn how to run a business; Ramat gets more animals that it can sell on to its buyers.

More information: Case 3

**Box 39 External financing for pastoralists in West Africa**

**Government support for livestock development in Burkina Faso**

The government of Burkina Faso has established a development fund to support livestock production. Financed through a tax on exports of cattle, goats and sheep, this fund offers loans for livestock activities, as well as to support training and animal health work. Both individuals and groups can apply for loans between $2,000 and $10,000. The fund charges 7% interest. Microfinance institutions that borrow money from the fund typically lend it on to borrowers at 13–15%.

In 2011, SNV supported a union of livestock keepers in the Boucle du Mouhoun region to submit project proposals to the fund. As a result, the fund lent a total of $40,000 to seven projects to buy and feed cattle for sale.

**FADEL: A dedicated microfinance lender for livestock in West Africa**

FADEL, the Financière africaine pour le développement de l'élevage (African Fund for Livestock Development), was formed in 2009 with support from several foreign partners, a Malian bank, the government of Mali, and livestock raisers in Côte d'Ivoire and Burkina Faso. Its capital is FCFA 50 million ($100,000), divided into 5,000 shares of FCFA 10,000 ($20) each. Based in the southern Malian city of Sikasso, it acts as a microfinance lender. People can borrow after they have been members for 6 months. They use the money for various purposes: fattening animals for sale, producing milk, petty trading, buying and selling cereals, and purchasing farm inputs. Interest rates vary according to the type of activity. Loan amounts range from FCFA 250,000 to 1 million ($525–$1,100).

More information: Tipoco Brigitte Ouedraogo (Burkina Faso), Bonaventure Dakouo, http://tinyurl.com/m35edgn (West Africa)

**Box 40 Tanzania Investment Bank's credit for processors**

Commercial interest rates in Tanzania are very high, and loan conditions are very stringent. That makes it difficult for the pastoralists and the traders and processors of livestock products to qualify for loans.

The Tanzania Investment Bank, a government-owned bank, has a special loan window for processors and others who add value to livestock products. The borrower has to present a business plan to the bank, explaining how it will use the money. For example, the bank may support a feedlot to purchase animals from pastoralists and fatten them up for sale to an abattoir.

The bank is expanding this loan window into a larger programme to finance agricultural projects. This will offer short-, medium- or long-term loans to groups of producers who are organized as a cooperative, as well as companies and microfinance institutions involved in agriculture. It will also consider start-ups that meet certain criteria. It will charge low interest rates: 4% for on-lenders and 5% for end-borrowers. On-lenders may not charge the end-borrowers more than 8% interest.

The repayment period ranges between 6 months and 15 years, depending on the nature of the activity being financed. There is a grace period (before the borrower has to start repaying), also depending on the type of activity.

More information: Jeremiah Temu; www.tib.co.tz/agriculturefinance.php





clients) can in fact be a viable proposition. But they run the danger of undercutting and crowding out investment by the private sector in serving these clients.

At the start of the chain, individual livestock keepers find it hard to get loans. But if they organize themselves into a group or cooperative, they may be able to attract loans from a microfinance institution, which they can then invest in an enterprise such as trading livestock. Alternatively, the group may lend the money on to its individual members. The group takes on the task of lending out small amounts to lots of mobile pastoralists: it decides who gets a loan, handles repayments, chases members who are in default, and shoulders the risk of someone not repaying.

Box 39 describes two initiatives to promote such external financing.

While commercial lenders may be reluctant to lend to individual pastoralists, they are much more likely to lend to a business that has fixed assets, collateral, and a bank balance. A bank may lend money to an abattoir, for example, so it can buy animals from pastoralists and pay them immediately. Box 40 outlines a credit scheme in Tanzania that does this, and that is expanding into lending also to cooperatives and microfinance institutions.

**Savings and credit cooperatives** Another way for pastoralists to get credit is to organize themselves into savings and credit cooperatives. The group members save a small amount on a regular basis, putting it into a common kitty. Members can then borrow a sum from the kitty, repaying it with interest (Figure 10).

Such schemes are common among smallholder crop and livestock farmers. They are used in pastoralist areas too, both to cover general expenses and to finance marketing.

Savings and credit cooperatives may be standalone (the first example in Box 41), or they may be run by or organized around a marketing organization such as a milk-collection centre or a craft-making cooperative (the second example in the box).

**Vouchers** Vouchers can be a useful addition to a credit scheme. An organization may issue vouchers to pastoralists, who can use them to pay for items such as inputs or services. The input

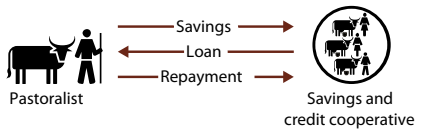



*Figure 10 Savings and credit cooperatives*

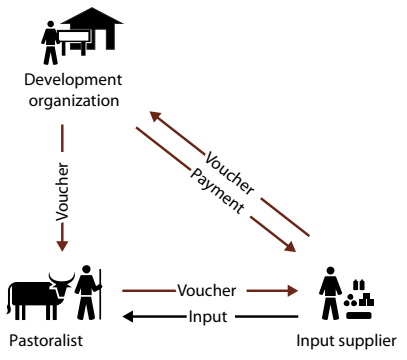



*Figure 11 Vouchers*

**Box 41 Savings and credit arrangements in Kenya**

**Village community banks in Turkana and Pokot counties, Kenya**

Terra Nuova and Vétérinaires sans Frontières Belgium have organized and trained several groups of pastoralists in northern Kenya on how to manage a community banking scheme.

Each group elects a chairman, secretary and treasurer. It has a lockable moneybox with two padlocks. The group's treasurer holds one key, while the secretary keeps the other. The chairman looks after the box itself, but has no key.

The group meets twice a week to put savings into the box. Each person's contribution is put into his or her account book. One member can then borrow money from the box at a low interest rate.

The group members have started petty trading activities such as buying and selling livestock drugs.

**Milk cooperatives as savings-and-loans schemes**

The East African Dairy Development Project, implemented by Heifer International, has helped set up 22 community milk-chilling plants in Rift Valley Province in Kenya. These plants collect milk from pastoralist milk producers, chill it and sell it on to retailers and consumers.

Ten of the plants have a shareholding arrangement that acts as a savings-and-loans scheme for members. People who deliver milk to the centre can opt to have part of the price (typically 5 or 10 shillings, 6–10 US cents a litre) paid into a shareholding fund in their name. If they need a loan, they can borrow up to three times their shareholding amount. So if a member has a shareholding of KSh 300, she can borrow up to KSh 900 ($10) – a useful sum in rural Kenya.

The cooperative charges 12% interest – much lower than the commercial rate of 20%. It redistributes any profits from its sales to the shareholders in the form of a dividend.

The cooperative also gets low-interest loans from commercial banks and lends the money on to its members.

More information: Sylvester Nyadero (Turkana and Pokot), Reuben Koech (East African dairy project)


*Credit and voucher schemes make it possible for pastoralists and traders to invest in production and marketing.*





**Box 42 Introducing sharia finance to pastoralist areas in Ethiopia**

The lack of sharia-compliant financial services has long been a problem in the Somali Region of Ethiopia. In 2011, the first such institution, the Somali Microfinance Institute Share Company, was launched. This was part of an initiative by Mercy Corps as part of the US Agency for International Development's Revitalizing Agricultural/Pastoral Incomes and New Markets project.

The company now has offices in Fiq, Jijiga (the capital of the Somali Region) and 14 other locations, staffed by 76 men and 31 women. It has disbursed birr 14,000,000 ($740,000) in loans, 80% of which have been to women. These loans are typically in amounts of birr 4,000 ($212) per initial one-year loan. Repayment rates have been excellent, with no defaults and many clients repaying their initial loans in full. Over 3,000 clients have saved birr 36,000,000 ($1,900,000).

The company has established a sharia committee of respected local elders to advise it on microfinance and to make sure that the loans are acceptable to local people. This has been very successful in helping people to trust the new system. Mercy Corps arranged for the company managers and the sharia committee to visit Hargeisa, in neighbouring Somaliland, to see how sharia-compliant finance works there.

More information: Emma Proud; www.mercycorps.org

or service provider then redeems the vouchers with the issuing organization (Figure 11). Heifer International's East Africa Dairy Development Project (Case 13) uses such an approach to support milk producers in Uganda. This arrangement allows the producers to decide what inputs and services they buy, but restricts their range of choices (the vouchers cannot be used to buy beer, for example). That makes sure that the credit is used to boost production, and not for other purposes.

**Sharia-compliant credit** Traditional banks and microfinance institutions charge interest on loans in order to recoup their costs, cover the risk of default, and to make a profit. But sharia, or Islamic law, regards this as usury, so prohibits it. Because many pastoralists are Muslims, they cannot obtain loans from such institutions. In their eyes, to do so would be to commit a sin.

Sharia-compliant financial institutions overcome this by finding ways to offer loans that avoid charging interest. In Ethiopia, Mercy Corps found that no banks were offering sharia-compliant loans, so it set up its own fund to do so (Case 1). It has also worked with the government of the Somali Region to introduce a loan scheme (Box 42).

## Insurance

Drought is by far the biggest cause of livestock deaths in northern Kenya. A prolonged period of dry weather can decimate a herd and throw a pastoralist family firmly into dire poverty. Insurance could compensate the herders for their losses, but traditional approaches to insurance do not work in pastoralist areas. In traditional insurance policies, the insurer pays out if the person insured reports a loss. That doesn't work with livestock (have the animals really died, or has their owner merely moved them somewhere else?). And pastoralist areas are too big and remote for insurance agents to verify losses on the ground.

Two developments are beginning to overcome these difficulties: the development of index-based insurance and the arrival of mobile phones (Box 43).

**Box 43 Index-based livestock insurance in Kenya**

**Index-based livestock insurance in Marsabit district**

The International Livestock Research Institute (ILRI) has developed an insurance scheme that avoids the need to verify the loss of animals. Instead of counting carcasses, it relies on satellite images of the vegetation. A computer model relates this to the expected levels of livestock mortality. If the vegetation is so sparse that the model predicts that 15% of the animals will die for lack of fodder, the insurance scheme will pay out.

ILRI works with three insurance companies to provide the service in Marsabit district in northern Kenya. Pastoralists pay about $1 to insure a sheep or goat, $10 for a cow, and $14 for a camel. The amount varies depending on how risk-prone the area is: in dry Upper Marsabit the premium is 5.5% of the value of the animal; in wetter Lower Marsabit it is 3.25%. To pay for the premiums, most herders sell a few goats.

Twice a year, at the end of the long dry season in September and after the short dry season in February, the computer model calculates whether the 15% threshold has been reached. If so, it triggers a payment to the relevant policyholders. The policyholders do not need to submit a claim; they receive the payment automatically. The idea is to cover only severe droughts; mild droughts and other causes of livestock deaths are not covered.

The scheme was launched in 2009, when it sold nearly 2,000 insurance policies and collected almost $47,000 in premiums. The second dry season covered was drier than the threshold, so the insurance company paid out a total of over $20,000.

**Kilimo Salama insurance for dairy farmers**

Mobile phones make it far easier to keep in touch with large numbers of scattered clients, handle small transactions, and even to sell insurance policies and pay out compensation for losses. The Kilimo Salama ("Safe Agriculture") insurance scheme in Kenya, introduced by the Syngenta Foundation, is an example that could be expanded to cover pastoralists.

This scheme was designed for maize and wheat. Local agrovet dealers sell policies to farmers. They use a paperless system with dedicated software to record details and to confirm immediately to the farmer that the policy has been approved. The agrovets use the mobile phone-based M-Pesa system (Box 36) to transfer payments.

Unlike the ILRI initiative, this scheme relies on automated weather stations to record rainfall. The farmers also receive tailored extension messages using data from their local weather station. If the weather station indicates that rainfall is below a certain threshold, the farmers receive an automatic payout, also via M-Pesa.

In 2012 the scheme was expanded to cover dairy cattle under an arrangement with Heifer Kenya and the Tanykina Dairy Cooperative in Eldoret.

More information: http://tinyurl.com/ltardo4, http://tinyurl.com/kmxuncl (Marsabit); http://tinyurl.com/kkd9snf, http://tinyurl.com/qc8hfnj (Kilimo Salama)

### Recommendations and lessons

- To use and benefit from financial services, pastoralists need to become part of the cash-based economy. This implies big changes in the way they and others do business.
- The success of financial services for pastoral communities depends on an enabling regulatory and legal framework, as well as favourable terms of trade for livestock and livestock products.





- Financial services are just one of several components that need to be in place for the marketing of pastoralists' products to work smoothly. Other components include access to inputs, markets and marketing infrastructure, land and appropriate technology.
- A range of financial services are required. The traditional focus in agricultural development projects has been microcredit, but other services, including money transfer, savings and insurance, may be equally important.
- Financial services must be tailored to the needs of each of the actors in the marketing chain. Credit and insurance services must be designed specifically for pastoralists: a scheme that works well for crops or sedentary livestock is unlikely to be suited (or would need to be heavily adapted) for mobile livestock. Close involvement of the pastoralists, together with a thorough understanding of their needs, constraints, goals, priorities, production system and environment, are needed to design appropriate financial services.
- The services must be delivered to pastoralists in an appropriate way. Mobile phones and agrovet stores offer flexible ways to reach large numbers of scattered clients at an affordable cost.

## TRANSPORT

Pastoralists tend to live in remote, inhospitable areas. Some major roads are well maintained, but many are terrible, and feeder roads are few and bumpy. Many so-called "roads" hardly deserve the name, and they may be impassable during part of the year. Holding pens and loading ramps for livestock are few. Transport companies are scarce, and there are few vehicles suitable for transporting animals, milk or meat. Overloading is a common problem; it can be cruel and lead to the death of animals. Speeding is another problem, and can result in serious accidents. These problems increase the cost of transport as well as the time taken to deliver the produce.

Herding animals is cheaper than loading them onto a lorry, so most animals are trekked from one grazing area to another, and to the processing centre or market – which may be hundreds of kilometres away. Disadvantages include:

- There are few grazing and watering facilities on the way, and many animals die en route. When they arrive at market, the animals are skinny, hungry and thirsty. The quality of meat suffers, and the animals are liable to fetch low prices.
- Herding animals can spread diseases if they pass through disease-ridden areas or come into contact with wildlife or local herds.
- The security of animals and herders can be a problem: cattle-rustling is common in some areas and often leads to loss of human lives.
- In some areas, the movement of livestock is hampered by the growth of bushes and shrubs such as mesquite, a weedy, thorny shrub that has been introduced as part of regreening schemes.
- Once the animals arrive at their destination, their owners can hardly drive them all the way back to their home areas, so find themselves in a weak bargaining position. They are forced to take the prices that are offered.

Most of these problems can be avoided if the animals are moved by lorry.

Similar problems affect the milk marketing chain. With no cooling equipment or electricity in rural areas, milk has to be transported warm, usually in unhygienic, plastic jerry cans, often on foot, by bicycle, or on donkeys and camels. Without treatment, it spoils quickly and can be transported only over short distances. That restricts the area that can supply milk and the number of herders who can produce for the market.

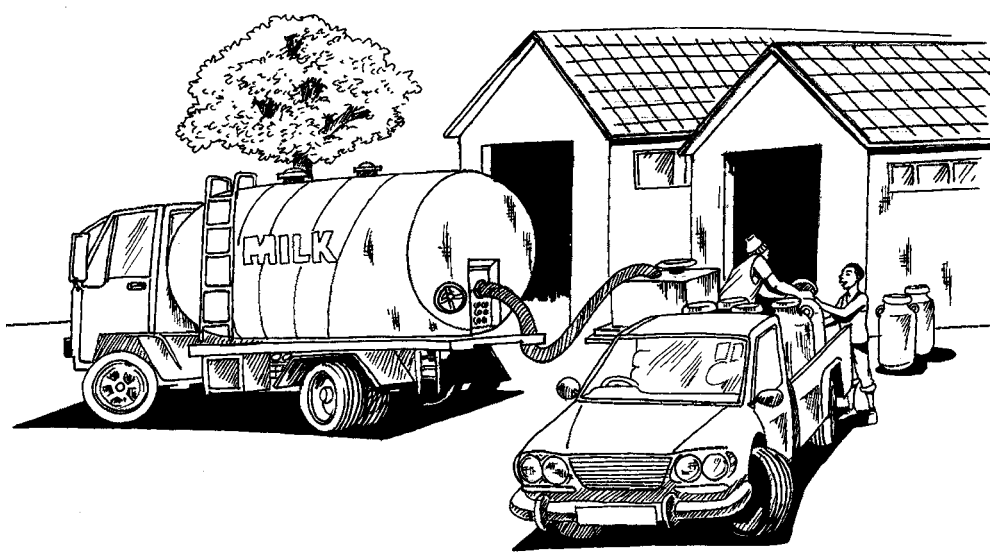
There are four main approaches to overcoming transport problems:

- Improving roads
- Improving vehicles
- Reducing the distance to be covered
- Improving facilities en route.

### Improving roads

The main roads in many pastoralist areas are gradually being improved through major road-building programmes, often foreign-funded. The refurbished roads are either asphalted or are all-weather gravel. The discovery of oil in northern Turkana district in Kenya is likely to result in big improvements to roads in the area. Expanding the network of feeder roads is particularly important for livestock production and marketing.

Major road improvements cost a lot, but they have numerous benefits. They boost the overall economy, improve national security, integrate remote areas, combat the effects of drought, etc. They make livestock production and marketing easier and improve access to inputs and services. But greater accessibility may also bring problems: think of greater competition from cheap imports and an influx of outsiders to farm previously remote land. It also encourages settlement along the roads, reducing pastoralists' access to grazing land.




*The marketing of livestock products depends on suitable transport and other infrastructure.*





**Box 44 Cold trucks to transport meat in Kenya**

The lack of refrigeration in most pastoralist areas severely limits the market for meat. If the animals are slaughtered and processed without cooling, the meat has a limited shelf life, so it can be marketed only locally. The only alternative is to transport the live animals to an abattoir which has cooling facilities for meat – which means a long trek or subjecting the animals to many hours crammed onto the back of a lorry bumping along dusty roads.

The Lomidat abattoir in Turkana, northern Kenya, has found a third alternative. It chills or freezes the meat, then loads it onto refrigerated trucks and takes it to the main meat markets in Kenya, including the capital city of Nairobi, 900 km or 15 hours away.

Maintaining this cold chain has opened up new markets for the pastoralists of Turkana, allowing them to compete on product quality and safety in the cities. The refrigerated lorry can carry more carcasses than a stock lorry, and it is not necessary to stop en route. That makes transporting chilled meat cheaper and faster than moving live animals.

More information: Case 8

### Improving vehicles

Where roads are in fair condition, milk is often transported using motorcycles, pickup trucks, small lorries, tractors and even insulated road tankers. These reduce delivery times, improving the product quality. But using motor vehicles is more expensive than bicycles, so requires larger amounts of milk to be bulked. The buyer must be willing to pay a premium price to cover the cost of transport and bulking.

Meat, milk and other dairy products are highly perishable and must be handled carefully before and during transportation. Refrigerated vehicles are needed to transport them over long distances. But they are expensive and depend on a cold chain: they pick up a product that is already refrigerated, and deliver it to a destination that also has refrigeration. That restricts their use to the large-scale transport between locations which have reliable electricity and cooling facilities (Box 44).

Without refrigeration, it is advisable to collect and transport milk and meat during the cool of the morning.

Specialized vehicles for transporting animals are expensive, but ordinary lorries can be modified by providing straw, sawdust or sand on the truck bed, and by using partitions to support the standing animals. Drivers should be experienced; they must avoid overloading, speeding and abrupt braking. Moving animals after sunset reduces heat stress.

The most suitable form of transport varies from place to place: it depends on the terrain, the state of the roads, the distance to be covered, the cost of using the vehicle, and the volume of milk to be transported. It is therefore not possible to recommend a specific means of transport for all pastoral areas.

Two of the cases in Chapter 8 give examples of improvements in vehicles:

- The Tanzania Livestock Marketing Project (Case 4) invested heavily in improved livestock transport. For example, it provided cattle wagons for the railway, and built sidings to make it easier to load and unload animals.
- Socroprolait in Burkina Faso (Case 14) increased the number of milk collectors and started using motorbikes rather than bicycles to deliver the milk to the processing plant.

### Reducing the distance to be covered

Another way to reduce problems with transport is to cut the distance that the animals or products have to be moved. This can be done in several ways:

- **By establishing markets or processing facilities closer to the producers** The Lomidat abattoir (Case 8) was established in Turkana to provide a market close to the district's producers. It has since established five satellite market centres around the Turkana district to make it easier for pastoralists to bring in their animals for sale. The Tanzania Livestock Marketing Project (Case 4) built over 50 markets where pastoralists could sell their animals.
- **By organizing collection points** where individual producers can deliver their animals or products. The animals or products are bulked before they are loaded onto a vehicle. This was the approach used by the Mieso Pastoralist Secretariat in Ethiopia (Case 11) and the Kiboga Cooperative in Uganda (Case 13). Both these established collection centres where producers could bring their milk each day.
- **By moving production closer to the market** Caafi Mascuud did this when he started keeping milking camels in town (Case 12).

### Improving facilities en route

A final way to improve transport is to improve the facilities along the route. These facilities include designated holding centres with loading ramps, water and feeding facilities, along with improved security. The Tanzania Livestock Marketing Project (Case 4) used this approach, as did a multi-country project in West Africa (Box 45).

### Recommendations and lessons

Transport is a key constraint for producing and marketing products in remote regions. Better roads and infrastructure are urgently needed to overcome this constraint. But they also result in profound, unpredictable changes. For example, they may make settlement and investment in hitherto remote areas more attractive for outsiders. That may bring population growth, the overexploitation of resources, and the further marginalization of pastoralists.

**Box 45 Cattle corridors in Burkina Faso and Benin**

In West Africa, huge numbers of animals raised in the inland Sahelian countries are sold in coastal markets in Benin, Côte d'Ivoire, Ghana, Senegal, Nigeria and Togo. The Projet d'Appui à la Productivité de l'Elevage (Livestock Productivity Support Project) helped create livestock corridors to make it easier for herders to trek their animals the long distances required.

It built infrastructure for feeding and watering the animals, including water pans, feed stores, pastures, rest areas, fences, loading ramps and veterinary drugstores. Five cattle markets were established along the corridors and equipped with veterinary and feed stores, wells and water troughs. These facilities are made available to pastoralists and cattle traders at fair prices.

The animals are moved slowly, taking many days to reach markets. Because they get enough water and feed, the animals stay in good condition and fetch a good price on arrival.

The project was implemented by the French NGO Acting for Life, in association with SNV and several local and national organizations. It was funded largely by the European Union.

More information: http://tinyurl.com/bocglwb; Albert Houedassou





Without markets and processing facilities nearby, pastoralists transport to deliver their products to customers and markets. The type of transport needs to be tailored to local conditions. Refrigerated vehicles are useful to carry large amounts of frozen goods between locations that have reliable electricity and cooling facilities. Elsewhere, simpler forms of transport are more appropriate.

Building abattoirs and other processing facilities in pastoral areas aids marketing and makes it possible to preserve pastoral products and bulk them for transportation.

Where transport by road or train is not possible and pastoralists have to trek their animals long distances to markets, establishing watering, feeding and health-care facilities on the way can help keep the trekked animals in good condition.

Permitting pastoralists to keep lactating animals close to cities aids milk marketing by offsetting the need to transport this perishable product a long way.

## MARKETPLACES

Pastoralists can sell their animals and products to various buyers: to traders and aggregators, to processors such as abattoirs, butchers or dairies, or directly to consumers. Traders and aggregators in turn sell to processors, retailers or consumers. The markets may be formal or informal, within the country or abroad (see Chapter 3).

Many transactions occur directly between individuals, or between individuals and an organization. For example, a pastoralist sells a few animals to a visiting trader who arrives with a pickup truck; the trader then delivers the animals to an abattoir. But such transactions tend to rely on established relationships: the pastoralist already knows the trader, and the trader knows the abattoir. Often, the buyer has an advantage in a particular transaction: he or she has better information on prices and can go elsewhere to find the animals or products required. The result: buyers tend to have more negotiating power and can push the price down.

Marketplaces offer many advantages over such individual trades. By bringing together many potential buyers and sellers, both sides have more choice. A seller is more likely to find a buyer willing to pay an acceptable price. A buyer is more likely to find someone who wants to sell the amount and quality of the product desired. If the products, buyers and sellers all come together at one place and time, trade is a lot more efficient: it is not necessary to travel huge distances in search of a few, marginally acceptable animals. Both buyers and sellers get more information about products, trading partners, prices and availability. All these advantages lead to larger volumes of trade and more stable prices.

For marketplaces to work well, they have to be in convenient locations, have suitable facilities, and be well run. Unfortunately, markets for livestock and livestock products in much of Africa fall short of these requirements.

### Increasing the number of markets

There are relatively few markets in pastoral areas. That forces animals or products to be brought a long way, with all the risks inherent in herding and transport (see the previous section). Traders have to visit individual farms or encampments to find animals to buy; herders have to either wait for a trader to arrive (and accept the price offered), or trek their animals to the nearest market, which may be hundreds of kilometres away.

Some livestock markets arise spontaneously as a group of buyers and sellers become accustomed to meeting at a particular place and time. But such locations tend to be inadequate: they lack the facilities and management required to function efficiently. And not enough markets emerge to serve all the potential buyers and sellers in a particular area.

National and local governments have an interest in establishing livestock markets. These stimulate the local economy and help drive development. They can act as a magnet for other types of trade and services: people who attend the market have money to spend on other things as well. They make it easier to control the movement of livestock and prevent diseases from spreading. Taxes and fees can be a source of revenue.

Creating a new market does not just mean putting up a few holding pens and telling people to come next Tuesday. It requires both careful planning of infrastructure and organizing buyers, sellers and service organizations. Choosing the location and planning the facilities together with the pastoralists can enhance their acceptance. The new market at Suswa, west of Nairobi in Kenya (Case 3), is an example. It was established by Ramat Livestock Enterprises, a local marketing company that had an interest in making sure it succeeded. Ramat put in a feedlot, water supply and other facilities, and organized the running of the market.

In northern Kenya, the Lomidat abattoir discovered that it needed to make it easier to pastoralists in the surrounding area to sell their animals. So it set up a series of satellite market centres at strategic sites around the district (Box 46). These serve not just the abattoir but other buyers too.

The Tanzania Livestock Marketing Project (Case 4) is an example of a major initiative that established a large number of markets and other facilities to serve the livestock trade. Most of these were successful, though the border markets were not. These were designed to channel and control the cross-border trade in live animals. But pastoralists and traders preferred to stick to their traditional trading routes that bypass what they see as burdensome and costly interference.

### Improving facilities

Those markets that do exist tend to be ill-equipped. Many are merely open areas where people have agreed to meet and trade. They lack facilities such as holding pens, feeding and watering troughs, perimeter fences, administration buildings, toilets, loading ramps and access roads. Facilities for trading meat and milk are rudimentary: a blood-soaked piece of cardboard placed on the dusty ground; a sweltering room where women sit with jerry cans of rapidly fermenting milk. Hygiene, quality, volumes and prices all suffer.

**Box 46 Satellite market centres to serve the Lomidat abattoir in Kenya**

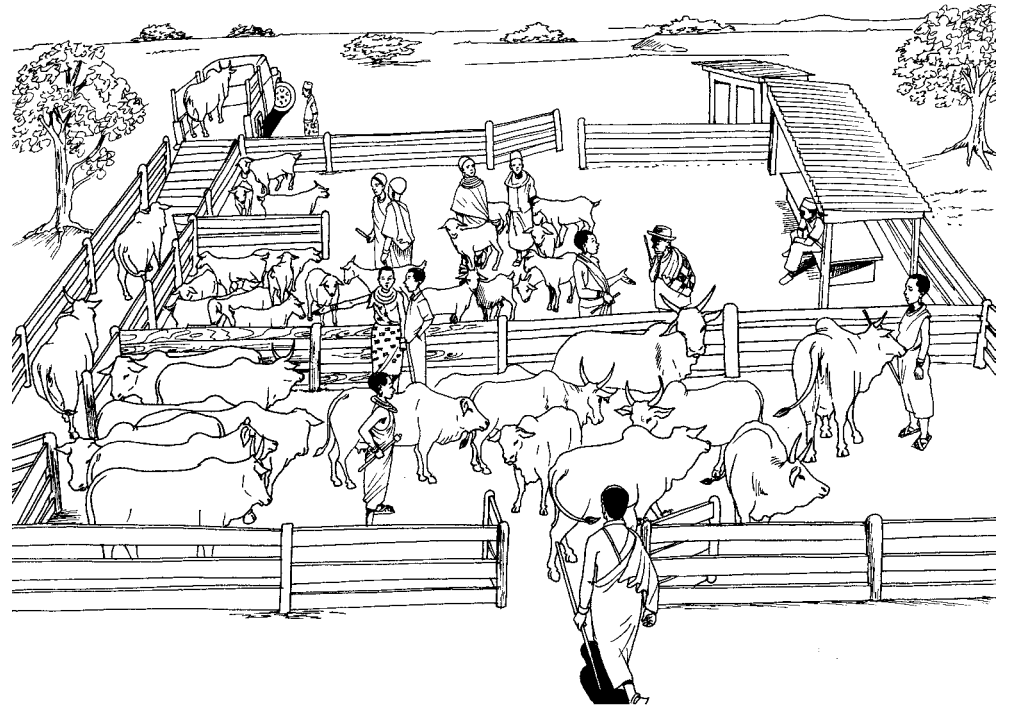
The Lomidat Pastoral Multipurpose Cooperative Society Ltd, the company that runs the Lomidat abattoir, has built five market centres to source animals for the abattoir. The markets are located on livestock migration routes in Lokangae, Letea, Kanakurudio, Lokori and Namouroputh. They were established in collaboration with the local pastoralist communities.

Each market has loading ramps and other facilities. The idea is to turn them into permanent markets that operate on set days, so bringing together producers and buyers and creating a permanent market linkage.

More information: Case 8







*To attract buyers and sellers – and to function efficiently – a marketplace needs fencing, water and feeding points, shelter, toilets, and a loading ramp.*

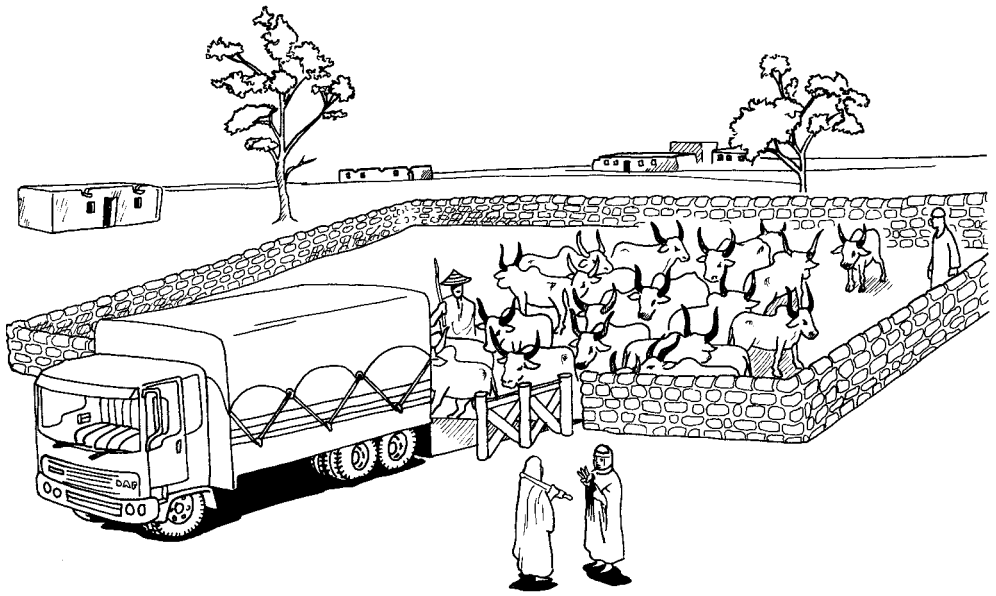
Well-constructed livestock markets should provide facilities for the safe and stress-free handling of animals, loading ramps, clean water, fences, shaded rest areas and offices. Perimeter fences improve security, prevent animals from straying, and make it possible to charge fees for vendors, buyers and visitors. Markets can be made more attractive by providing facilities such as stores selling drugs, feed and food, and by offering services such as microfinance, market information and extension.

A disadvantage of livestock markets is the danger of spreading disease. This is particularly a problem if animals remain unsold: if they have picked up a disease at or on the way to the market, returning them to their place of origin risks spreading the infection. In Uganda, unsold animals are supposed to be quarantined for a specified period of time to minimize such risks. Livestock markets require facilities for health inspections, quarantine and emergency slaughter of animals.

Two of our cases focused on improving the infrastructure of existing markets. Both of these combined improved infrastructure with changes in the management. The Farakala market in Mali (Case 6) was run-down and poorly managed. SNV helped build a new market and set up a joint management scheme (see below). In Benin, a project built fencing, an administration building and other facilities at the Bassila market. It also helped reorganize how the market was run (Case 7).

### Improving market management

The problem is sometimes not the physical facilities, but the way they are managed. Services such as security, maintenance and health controls are poor. Small numbers of intermediaries control



*Good market facilities make trading easier and more efficient.*

the trade and earn the biggest slice of profit. Fees, if they are collected at all, are pocketed by corrupt officials.

Some marketplaces are owned and managed by **local governments**, but government officials usually lack the knowledge and skills needed. At worst, they tend to regard the markets as a burden, or merely as a convenient source of revenue. Other marketplaces are owned by **cooperatives**, but these often lack the capital needed to invest in facilities and the authority required to enforce rules. The result is mismanagement and neglect. Buyers and sellers vote with their feet: they take their trade elsewhere.

**Joint management** A common solution among the cases in this book is to manage the market jointly, with the local authority and a council of market users both taking responsibility. This approach was used by the Kenya Livestock Marketing Council (Case 2) in reorganizing the governance of dozens of markets in Kenya. In the Farakala market in Mali (Case 6), the local co-operative managed the market, but this had no money to invest in facilities. The donor insisted on the local authority taking ownership as a condition for investment in new facilities. In the Bassila market in Benin, SNV organized a general assembly of all market stakeholders and a management committee with representatives of each group (Case 7). That put an end to the dominance by a small group of brokers.

**Company-run markets** Another method is for a company or cooperative to set up and run the market itself. This was the approach used by Heifer International and Ramat Livestock Enterprises (Case 3) and the Lomidat abattoir (Case 8) in Kenya. The company or cooperative has an incentive to make the market a success: the Lomidat abattoir wants to ensure a regular supply of animals for slaughter, while for Ramat, the market is its main activity and source of income.





### Recommendations and lessons

Direct sales from pastoralists to buyers save pastoralists from having to transport their animals or products to markets. While such sales often rely on established relationships and mutual trust, they often give an advantage to the buyers, who have better access to price and other outside information.

Marketplaces can overcome this disadvantage, but they are rare or inadequate in pastoral areas. Functioning markets are needed in locations that pastoralists can reach easily. They should have facilities suitable for selling animals and perishable products.

Including pastoralists in the planning of marketplaces can enhance their acceptance. Retail stores and services such as microfinance, market information and extension can make marketplaces more attractive.

Good management is key to the functioning of a marketplace. Joint management by local authorities and councils of market users can overcome the shortcomings that both groups may have when managing a market alone. To make the joint model work, both sides need to communicate well with each other and clearly delineate their responsibilities. An alternative is to have the marketplace run by a company or cooperative.

## PROCESSING

Most livestock products need some kind of processing before they can be consumed. There are two exceptions: milk, which can be sold straight from the udder, and live animals used for breeding or draught.

But fresh milk does not keep long: if it cannot be sold straight away, it has to be pasteurized and chilled to stop it from going off. It can also be turned into a huge range of subsidiary products: butter, ghee, yoghurt, buttermilk, cheese, ice cream, etc. All of these have to packaged hygienically and cooled to extend their shelf life.

Slaughtering animals produces carcasses, as well as various other useful products: the inner organs, bone, fat, horns, hides and tails. The carcasses can be sold as sides (of beef) or whole (for sheep and goats), or cut into a range of joints. The meat may be minced or turned into sausages, luncheon meat, biltong (strips of dried meat), or many other products. The meat products may be chilled or frozen, or packaged and labelled ready for retail. Abattoirs also produce a lot of waste, which must be disposed of safely.

Tanneries turn fresh hides and skins into leather and suede: the raw materials for shoes, clothing, furnishings and many other products.

### Establishing new processing industries

Processing facilities such as abattoirs, tanneries, chilling plants and dairies are rare in pastoralist areas. Building them would have several benefits. It would bring the immediate buyer closer to where the products are produced. It would increase demand for livestock. Because processing tends to be labour-intensive, it would create jobs, boost local incomes and integrate remote areas into the cash economy. Abattoirs also make it possible to "destock" herds (reduce the number of animals) when drought threatens – so making it possible for pastoralists to earn money from animals that would otherwise die for lack of feed and water (Box 47).

**Box 47 New abattoirs in pastoral areas of Kenya**

The Lomidat slaughterhouse in Turkana, northern Kenya has modern slaughter facilities and well-trained personnel. It is a state-of-the-art facility that provides pastoralists with ready markets for their produce. It saves the pastoralists the problem of walking long distances to sell their animals, and offers them a decent price.

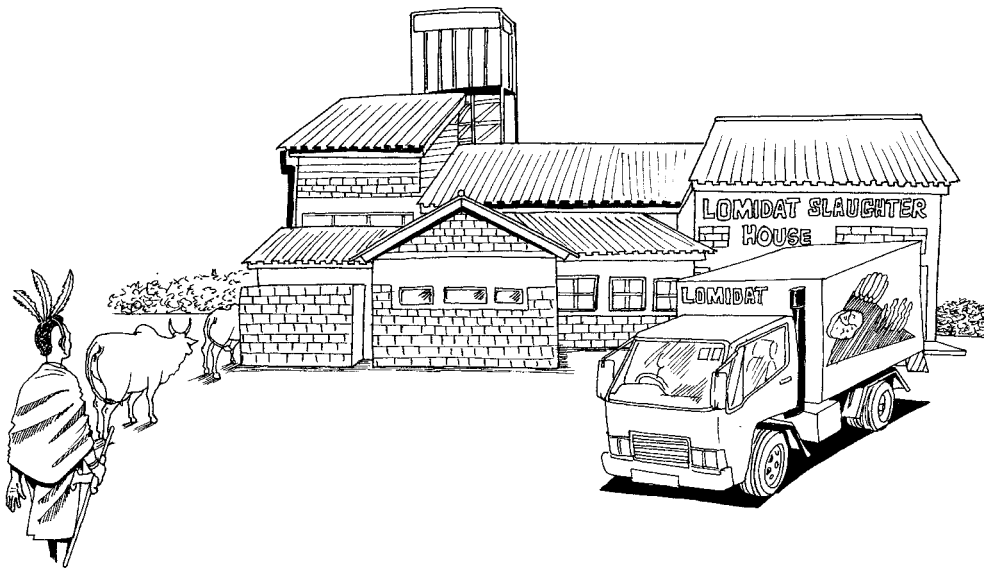
The Kenyan government is setting up similar abattoirs in Garissa, Pokot and other pastoral areas. These facilities will be available for pastoralists to slaughter animals when drought threatens to decimate their herds, so avoiding huge losses.

More information: www.lomidatmeat.co.ke

But such facilities rely on several preconditions. Most crucially, they require electricity, roads and a water supply – all of which are scarce in pastoralist areas. They also rely on a skilled, settled, labour force – which is also absent. For these reasons, processing facilities, where they exist at all, are to be found in the few towns in pastoralist regions.

Processing facilities also require specialized equipment if they are to turn out products that can be sold to national supermarkets or exported. Dairies need vats, heaters, coolers, pumps, testing equipment, churns and refrigerated road tankers. Abattoirs need feedlots, holding pens, loading areas, slaughtering facilities, processing lines, cool rooms, butchering and packaging equipment, waste-handling facilities, and refrigerated lorries to transport the products. Tanneries need equipment to handle the corrosive salt and other chemicals used to preserve and tan hides.

This equipment is costly and requires significant levels of investment, along with expertise in designing and managing the facilities. Pastoral areas have neither the money nor the right skills.

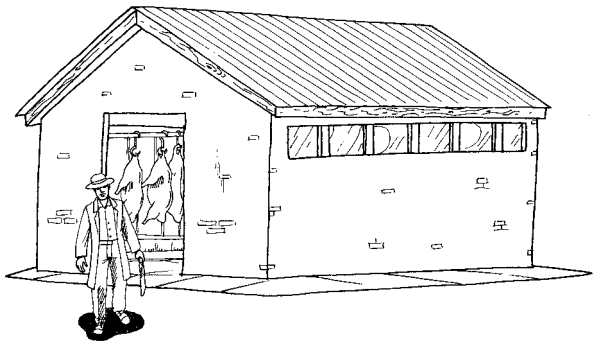



*Establishing new processing facilities from scratch can require a lot of investment...*





*... but processing facilities do not have to be fancy to be useful.*



It is possible to raise some of the funds locally, e.g., by organizing producers or traders to invest their savings in the venture. But this is likely to cover only a fraction of the costs. The investment and expertise must therefore come from outside: through the government, a development project or a private-sector venture, or through some kind of joint arrangement.

Six of the cases in this book describe establishing new processing industries. Three of these set up abattoirs: the Tanzania Livestock Marketing Project (Case 4), the Uganda Meat Producers Cooperative Union (Case 5), and the Lomidat slaughterhouse (Case 8). Two cases established dairies: the Mieso Pastoralist Secretariat's *faraqa annani* small-scale dairies in Ethiopia (Case 11) and the Kiboga cooperative's milk-chilling plant in Uganda (Case 13). In addition, the project in Maswa, Tanzania, (Case 10) founded several tanneries to make use of locally produced hides and skins.

None of these cases illustrates a purely private-sector commercial venture. This may reflect how the cases were selected (via the networks of development organizations). More likely, though, it reflects the reality that commercial ventures are unwilling to risk investing large amounts of capital in areas they regard as risky, without the additional investment and collaboration with the government or a development project. Until this hurdle is overcome, economic development in pastoralist areas is not likely to be self-generating.

All of the cases above involved development organizations, the local or national government, and producers' organizations. Such organizations have a social or developmental orientation. Tensions inevitably arise when they try to establish a commercially viable operation: they may not be in a position to make the decisions necessary to make sure the venture is profitable and sustainable. To do this, they require professional managers who have the necessary skills and orientation.

To make things more complicated, the processing industries that are set up must combine commercial viability with a social mission. They not only have to make a profit (or at least break even financially); they must also serve a particular group of people: the pastoralists who supply them, and the staff they employ. They must offer favourable prices and terms and additional services. For example, the Lobatse abattoir in Botswana (Case 9) pays the same price as in neighbouring South Africa, and is obliged to accept all the animals that herders wish to sell to it. A purely commercial venture with no social mission would not expect to offer such perks, and would not incur the additional costs involved.

That means that development interventions that aim to establish processing industries in pastoralist areas have to overcome three hurdles:

- They must identify investment opportunities that the private sector has somehow failed to exploit.
- They must switch from a development orientation to a commercial posture in order to create a viable enterprise.
- They must incur the additional costs required by their social mandate.

While these hurdles are common in many areas of development work, they are particularly challenging in pastoralist areas because of remoteness, the lack of infrastructure, the mobility of their suppliers, and the extreme seasonal variations in supplies.

### Improving existing processing activities

It may not be necessary to invest in very expensive modern facilities. Even fairly rudimentary equipment can greatly improve the hygiene and quality of the product. A simple concrete slab with an adequate supply of clean water can greatly improve the hygiene and handling of meat. Replacing plastic jerry cans (which are impossible to clean) with aluminium churns can greatly reduce the contamination of milk. Such equipment may be enough if the product is sold fresh on the local market. Only meat and milk destined for distant urban markets may need to be chilled or frozen.

The Socroprolait dairy in Burkina Faso (Case 14) gives an example of some simple changes that can greatly improve the processing of livestock products. The cooperative speeded up milk collections by using motorbikes rather than bicycles. That improved quality and enabled the cooperative to collect milk from further away and from more producers. It now uses a gas stove, rather than wood, to pasteurize the milk.

### Maintaining a steady flow of quality raw materials

It is hard to ensure a regular supply of animals or milk in the quantities and of the quality required. Milk producers, for example, are likely to have little surplus milk during the dry season, when water and fodder are scarce. Herders may want to hold onto their animals and multiply their herds when grazing conditions are good; they may also want to retain as many animals as possible during a drought in the hope that at least some pull through. When drought strikes hard and they are forced to sell, many herders may want to do so at the same time. A lot of emaciated animals arrive at the abattoir at the same time; they have to be fattened up before they can be slaughtered.

Pastoralists understandably want to fulfil their own families' needs first. They make sure they have enough to eat, and have enough to tide them over the hard times ahead, and only then consider selling a surplus. For settled farmers, buying feed is usually the biggest expense, so they want to sell animals as soon as possible. Pastoralists, on the other hand, send their animals out to graze, so have no feed costs and no pressure to sell. Their decision to sell may instead depend on their need for cash, for example to cover school fees or emergency expenses.

In addition, many pastoralists move their herds over long distances in search of pasture. It is hard to collect small quantities of milk from a herd that moves from place to place. It is also impractical to deliver animals to an abattoir if they are hundreds of kilometres away and far from a road.

Maintaining the quality of inputs is also difficult. Thin animals need to be fattened; diseased animals have to be treated and quarantined. Sour milk cannot be made fresh, and milk that has been diluted or contaminated can ruin a whole batch.





The processing plants try to overcome these difficulties by making it easier for suppliers to sell them their animals or milk. A common strategy is to set up satellite collection points (see the section on *Transport* above). The Kiboga cooperative in Uganda (Case 13) established milk-collection points, as did the Mieso Pastoralist Secretariat's *faraqa annani* milk-marketing groups in Ethiopia (Case 11). This approach works for animals too: the Lomidat slaughterhouse in Kenya has set up satellite livestock markets. These satellite centres may be merely somewhere where the products can be bulked and then picked up; or they may do some processing, such as chilling, testing, grading and slaughtering.

Another way to improve the flow of inputs is to make it attractive for pastoralists to sell their output. The Lobatse abattoir in Botswana offers three different credit schemes for feedlot owners and pastoralists (Case 9). Other strategies include undertaking to buy all the animals that the pastoralist wishes to sell, and offering above-market prices.

### Finding markets

Among the local rural population in pastoralist areas, demand for processed products is limited: the population density is low, and many people already produce all the animal products they need. So the main markets are likely to be in the local towns, distant cities, and abroad.

Without chilling facilities and a cold chain, milk producers have to be close to their markets. Hawrindé Biradam's collection centre is in Say, a mere 55 km from Niamey, the capital of Niger (Case 15). Socoprolait is located in Houndé, a provincial capital on the main road between the two main cities in Burkina Faso (Case 14). All the milk processors described in the cases have a network of retailers who sell their output.

Abattoirs tend to serve more distant markets, and have to put considerable effort into finding and securing buyers. The Lomidat slaughterhouse in northern Kenya (Case 8) serves customers in Nairobi and elsewhere; it emphasizes the quality of its products. The Lobatse abattoir in Botswana (Case 9) sells its products through subsidiaries in the United Kingdom, Germany, the Netherlands and South Africa. It has a European Unon quota of nearly 19,000 tonnes a year, but has not yet been able to supply the full amount. It must comply with the importing countries' strict quality requirements and compete with producers from the USA, Australia and Brazil. (An outbreak of foot-and-mouth disease has currently interrupted exports, emphasizing the importance of strict disease control to comply with the requirements of export markets.)

### Recommendations and lessons

Milk and meat are perishable and easily contaminated. In many instances, small changes such as improving hygiene during milking and slaughter and transport can significantly improve their shelf life and quality.

The establishment of processing facilities in pastoral areas supports the marketing of perishable products. However, sophisticated facilities require infrastructure and specialized equipment, so can be very expensive. Outside investment by the government, development projects or private-sector ventures is needed to support such facilities.

Faced with seasonal changes and emergencies, it is difficult for pastoralists to keep processors regularly supplied with quality animals and milk. Processors can establish satellite centres where

pastoralists can deliver their products, and where they can get access to fodder, credit and other services.

## QUALITY CONTROL

The poor quality of livestock and products produced by pastoralists is one of the major hindrances to selling to high-value markets. They often fail to meet the requirements of processors or retailers, or reach official standards set by the government. There are various reasons for this:

- **Animal quality** Animals may be thin or diseased when they arrive at the market or abattoir because of a lack of feed or veterinary treatment. They may have walked long distances to reach their destination. They may be over- (or more usually under-) weight, and older than the buyers' require. Owners often prefer to sell their older or non-productive animals, keeping the younger animals for their own use.
- **Awareness** People are often unaware of the need to maintain hygiene, and do not know how to do so. Traditional methods of milking, slaughtering, and curing hides and skins reduce the product quality. For example, herders sometimes use urine to clean milk containers, apply cow dung on teats to prevent calves from suckling, and milk animals without washing their hands first.
- **Contamination** Animals may be suffering from mastitis, which makes the milk unsuitable for consumption. Treatment with antibiotics or acaricides (medicines used to control ticks) may leave unacceptable levels of residues in the milk. Producers, collectors or traders may add water to milk to increase its volume.
- **Water** A lack of clean water makes it hard to maintain hygiene in meat and milk production.
- **Equipment** Equipment is often inadequate. Milk may be carried or stored in open buckets, where it is easily contaminated. It is transported in plastic jerry cans, which are impossible to keep clean, despite repeated washing. Slaughtering and butchering slabs are rare, so many animals are killed and cut up on the ground, leading to contamination. Without chilling facilities and fly screens, meat and milk go off quickly.
- **Distance and delays** The long distance to collection centres may mean that milk deteriorates during transport.
- **Inspection** Inspection, testing and grading services are needed to ensure that the products are of acceptable quality. But such services are absent in many pastoral areas. There are not enough trained personnel or testing facilities.
- **Incentives** There are few incentives for producing good-quality products. Milk, for example, is sold on the basis of weight or volume only, not butterfat content or acidity. Understandably, producers do not see the value of testing and grading their milk; they prefer to sell to buyers who are not fussy about quality.

### Training

Better facilities and procedures require people who know how to use them. Training is vital, both for the people who operate the facilities, and for the producers who supply the animals or milk. We cover this aspect in detail in the next chapter.





### Improving facilities and procedures

Adequate facilities are vital to check and maintain quality. These include handling facilities and equipment (holding pens, loading ramps, clean water supplies, sanitary facilities) at markets and abattoirs, testing equipment and refrigeration facilities at abattoirs and milk-collection centres, and suitable equipment for transport and storage (cool-boxes, aluminium or stainless milk cans and milking pails, refrigerated trucks). Abattoirs that accept substandard animals need feedlots to fatten them up before slaughter.

The *Processing* section above lists six cases where a new processing industry was established to turn low-quality local products into items that could attract a higher-value market. Several of the other cases describe attempts to improve facilities to boost quality:

- Ramat Livestock Enterprises in Kenya (Case 3) has a feedlot at its market in Suswa, to bring animals up to market weight.
- The Lobatse case in Botswana (Case 9) illustrates some alternatives to the abattoir managing its own feedlot: the abattoir runs several credit schemes to ensure good-quality animals arrive at its unloading pen.
- The Kiboga dairy in Uganda (Case 13) used a loan to buy a milk cooler – which generated enough profit for the cooperative to buy a second one in 2 years.

But the new facilities have to be appropriate: the Lesitu Annani Gorbo dairy cooperative in Ethiopia (Case 11) got a new refrigerator, but cannot use it because the area has no power supply.

New facilities usually require changes in procedures: more careful handling, new steps in processes, better record-keeping. Staff have to be trained how to use the facilities correctly if they are to have the desired impact.

There may be opportunities to improve procedures without lots of new equipment. An example of this is in the Socoprolait dairy in Burkina Faso (Case 14), where speedier collection improved milk quality without the need for new gear.

### Improving inspection

Formal markets for meat and milk require that products are inspected at various stages in the marketing chain.

**Live animals** leaving livestock markets are supposed to be inspected by professional veterinarians and have a movement permit issued to the transporter. While the markets provide the opportunity to control the movement of livestock and therefore spread of diseases, they also provide infrastructure for proper handling and inspection of the animals.

A veterinarian checks animals when they arrive at the abattoir, and an inspector checks the meat after slaughter for diseases and other problems. Grading of animals and meat may allow producers to get a premium price for good quality. All the abattoirs described in the cases have such procedures.

**Milk** also goes through several inspections: on acceptance by the dairy, and at various stages in processing. These tests aim to detect things like the fat content, whether the milk has been adulterated, as well as the presence of bacteria and things like antibiotics and chemicals that may harm consumers. Two of the five dairy cases mention such testing: the Kibogo West Livestock Cooperative Society in Uganda (Case 13) and Socoprolait in Burkina Faso (Case 14). The two

*It is vital to control the quality of products from pastoralist areas if they are to marketed competitively.*

Ethiopian dairy cases that serve local markets (the *faraqa annani* groups in Case 11, and the urban camels in Case 12) do not appear to include testing.

Such quality tests have to be done on site and the results have to be available immediately – before diseased meat is further processed or the contents of a contaminated churn are mixed with wholesome milk. That means the abattoir or dairy has to invest in the trained staff and special equipment required.

### Providing incentives

Perhaps the most important way of improving quality is to provide incentives to producers and processors to deliver superior products. That means inspecting or testing animals and products, paying a premium for those that exceed a certain standard, and penalizing (and if necessary rejecting) those that are substandard.

Few of the cases in this book specifically mention such incentives, but several of them do state that the product is tested (see *Improving inspection* above). Examples are the Kibogo cooperative in Uganda (Case 13) and Socroprolait in Niger (Case 15). The Lobatse abattoir in Botswana (Case 9) is obliged to accept all animals that it receives, but it grades them and pays the herders accordingly.

Creating a market can give producers an incentive to supply a quality product. The new tanneries in Tanzania (Case 10) are an example of this. They buy quality hides from pastoralists at a premium price – ten times what traders usually pay. The camel milk market in Kenya (Box 6) is another: consumers in distant Nairobi are so eager for camel milk that they pay double the price of cow milk. That is enough to make it profitable to transport the milk 300 km from rangelands around Isiolo to the capital.





### Recommendations and lessons

To serve local, informal markets, testing is not vital: the time from production to consumption is short, so products such as meat and milk do not need to be stored for a long time. Formal markets, however, require a rigorous inspection system. Actors further along the marketing chain, such as processors, retailers and consumers, will reject any products that do not conform to their quality expectations. They are also likely to stop buying from the supplier of the offending items. One dud batch can ruin a business relationship – and an entire marketing chain.

So if producers and processors want to benefit from the higher volumes and prices offered by a formal market, they have to inaugurate adequate quality controls. That requires investment in equipment, personnel and procedures, along with constant vigilance.

A sustainable system for testing should be effective but simple, reliable, cheap to operate, and appropriate for the pastoralist setting. Ideally, this should be done by pastoralist communities themselves.

For **live animals and meat**, this means training herders, traders and abattoir staff on animal quality, as in Ramat Livestock Enterprises in Kenya (Case 3). Community-based meat inspectors can identify diseased animals and meat, and report problems to professional veterinary workers using mobile phones. Where necessary, samples can be sent to distant laboratories for further examination.

Livestock and meat inspection and grading services are essential at all slaughter facilities. Routine medical examination of meat handlers is necessary and should be vigorously enforced by the relevant national health or standards or meat regulatory agency.

For **milk**, it means establishing simple tests on milk at rural milk collection centres. These enable the producers and buyers to grade the milk before it is accepted. Tests include visual inspection and tasting, and testing using simple equipment. Collection centres should obtain the skills, equipment and materials needed to do this. Young people can be trained in testing and grading.

Key points early in the marketing chain – markets, abattoirs and milk-collection centres – must have adequate facilities for checking and maintaining quality.

Producers and processors should be trained on how to deliver and produce superior products. They should get a price incentive for doing so.

Interventions to improve quality must be appropriate. That depends on the local situation and the target market: it would be unprofitable to invest a lot in top-notch quality in order to serve an informal local market. For formal national or international markets, however, such a concern for quality is unavoidable.

# 6 Skills and organization

THE PREVIOUS two chapters focus on building opportunities for pastoralists and other actors to produce, process and market livestock products. But by themselves, opportunities are not enough. People need the knowledge and skills to take advantage of the opportunities that arise. That implies the need to build human and social capital – the subject of this chapter. By "human capital" we mean individual skills and abilities; by "social capital" we understand the relationships among people.

We look first at the capacity needs of various actors in pastoralist marketing chains, and ways to build this capacity. We then turn to efforts to organize pastoralists and other actors to make the marketing chain more efficient. Finally, we investigate the theme of gender and the role of women in pastoralist marketing.

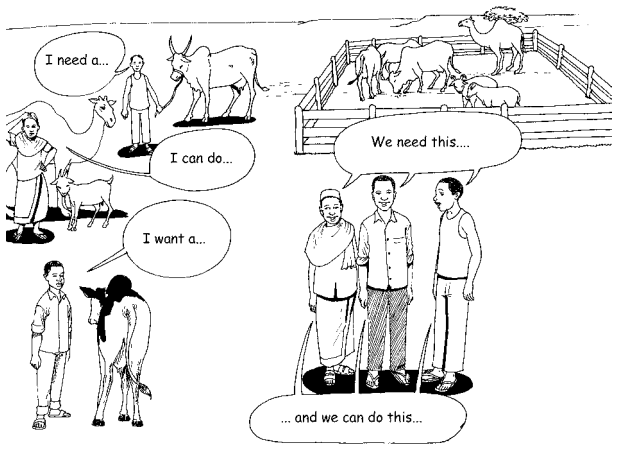
## BUILDING CAPACITY

The initiatives in this book followed four main approaches to capacity building:

- **Improving existing activities** This means enhancing people's abilities to do something they already do. Examples are training livestock raisers on animal health and feeding, enabling milk producers to improve milk hygiene, and helping producers market their products. The aim is to increase the volume or quality of the product (so raising its value), or to reduce the costs of producing and marketing it.
- **Enabling people to get services** This involves enabling people to obtain services such as credit, inputs and market information that they need to improve their production and marketing.
- **Adding activities in the marketing chain** This means enabling people to take on additional activities, such as bulking milk, setting up a dairy, or organizing a market. The aim is to increase the value of the product by improving its handling, processing it, or by making the chain more efficient.
- **Establishing new functions** Several of the projects created new organizations (or radically revised old ones) and types of employment. Examples are the Lomidat abattoir in Kenya (Case 8), the tanneries in Tanzania (Case 10), and the dairies in Uganda (Case 13) and Burkina Faso (Case 14). The jobs created are full-time (or seasonal), and the people employed typically get a wage or salary. Many of these jobs require new types of skills: slaughtering and butchering animals, for example, or running dairy equipment.

The first three of these capacity-building approaches mean that people take on additional activities in the chain. For example, a pastoralist may also start processing and bulking milk, tak-

*Capacity building interventions should be based on existing skills and needs.*




ing over some of the functions of a processor or trader. The fourth approach means that people become more specialized: they perform fewer functions in the chain. A worker in an abattoir or a lorry driver is unlikely to be fully engaged in raising livestock, for example.

Do marketing chain actors become more specialized or more generalized over time? As marketing chains become more sophisticated, we can see both trends. Livestock keepers tend to specialize in certain types of production (such as dairying), but they also take on new activities (such as checking quality and bulking the milk). At the same time, new specialist jobs arise in the chain: milk testers, equipment maintenance staff, marketing managers, drivers and guards. Some of these jobs are skilled (and tend to be well-paid); others require lower levels of skill and tend to attract lower pay. Over time, fewer people are employed in production, and more are employed further down the chain in processing and marketing.

## Assessing needs

Capacity-building efforts rarely start from scratch. Pastoralists traditionally process their own products: herders may slaughter an animal and cut the meat into strips to dry it; milk producers may turn their raw product into butter. Similarly, pastoralists already sell their products locally – which implies they already have certain marketing abilities and traditional skills that they can build on. Indeed, the traditional ways of doing things may have advantages (such as local availability or lower cost) over the new approaches. And people like what they are used to: it can be difficult to persuade a milk producer to give up using the familiar calabashes or plastic jerry cans in favour of expensive aluminium churns.

When designing capacity-building interventions, it is important to assess the skills that people already have, and to fill the gaps. This assessment is best done in a participatory way to ensure that it is accurate and reflects people's opinions, and to encourage a feeling of ownership.

SNV's work in Burkina Faso and Benin is an example of how this can be done. SNV hired a local capacity builder to bring the various actors (in this case, pastoralists, transporters, local authorities and input suppliers) together to analyse the strengths, weaknesses and opportunities in the local livestock marketing chains. This analysis was turned into action points that would convert the opportunities into profitable activities. The analysis also identified capacity gaps to be filled to ensure success (Box 48).





**Box 48 Bringing stakeholders together to improve market functioning in Burkina Faso**

SNV aimed to improve the governance of livestock markets in the Boucle de Mouhoun region in Burkina Faso. It began with a participatory dialogue involving all the various groups with an interest in the market. This identified constraints to the smooth operation of the markets, and suggestions for improvements. The market management committees were reorganized and trained, and project staff helped them develop a code of conduct to regulate the markets' functioning. Better governance in turn made the markets more attractive for livestock sellers, increasing the number of animals on offer, and attracting more buyers.

More information: Tipoco Brigitte Ouedraogo

## Whose capacity?

Efforts to improve the marketing of livestock products focus on four main groups: pastoralist men and women who produce the raw products (mainly meat and milk), the people who process the product, traders, and service providers. Each of these groups has different capacity needs and faces different situations, so the methods of building their capacity vary.

The members of these groups are not necessarily different individuals: they may be one and the same. A pastoralist who raises livestock may also buy animals from friends and neighbours, and sell them on to someone else. A dairy producer may collect raw milk and process it before selling it. Organized into groups, pastoralists may take turns to collect, process and sell their products.

**Pastoralists** Pastoralists face various capacity-related problems in producing and marketing their products. They do not know how to produce the required quality, so prices are low; they produce small amounts of meat and milk, so cannot sell in bulk. Their limited understanding of markets and market opportunities means they cannot negotiate better prices or conditions. They typically have low levels of formal education, and many are illiterate or innumerate.

Pastoralists need to improve their abilities in various areas if they are to improve the volume and quality of their output, reduce their production costs, and get the services they require. They need to learn new skills so they can supply the products that higher-value markets demand. These skills include:

- **Livestock production** This covers animal breeding, health, feeding, hygiene and milk production.
- **Finance** This includes financial literacy, record keeping, monitoring costs and income, saving, and obtaining and repaying loans.
- **Communication** This covers obtaining and using market information, lobbying and advocacy.
- **Business and marketing** These are the skills needed to identify and meet the requirements of a profitable market. They include market assessment, product selection, and identifying and negotiating with buyers.
- **Organization and leadership** These are skills to improve the efficiency and effectiveness of production and marketing. Examples include forming and managing organizations, planning, monitoring, managing meetings, and record-keeping.

Several of the projects described in this book built the capacity of livestock producers in these areas. Ramat Livestock Enterprises (Case 3), for example, trained young Maasai men and women in livestock management, conservation, grazing, animal health and entrepreneurship. The Uganda Meat Export Development Programme (Case 5) offers training in livestock management and business skills. The Kiboga cooperative in Uganda (Case 13) organizes farmer training, exchange visits, field days and seminars on business opportunities. In Burkina Faso, SNV and the Socroprolait dairy (Case 14) arranged for members to get training on feeding and care of dairy cattle. And the Lobatse abattoir in Botswana (Case 9) keeps pastoralists informed about market requirements through the mass media, meetings and field days.

**Traders and brokers** In this category we include traders (who buy and sell animals or livestock products) and brokers (who bring buyers and sellers together and arrange sales, but who do not purchase the items themselves). The latter are sometimes called "middlemen".

The importance of traders and brokers in the marketing chain is often under-appreciated. Indeed, many pastoralists and development organizations regard them as exploitative and accuse them of ripping off poor producers.

While there may be an element of truth in this – for traders naturally try to get the best value – their contribution to the marketing chain is often underestimated. They perform a vital role: they purchase animals or milk from the producers or processors, bulk them and transport them to the buyers at the next stage in the chain. They take on a huge amount of risk: what if the lorry has an accident on the road, and the animals are killed or injured? What if the milk goes sour before it reaches its destination? What if the abattoir rejects a load of animals because of poor quality or disease? Many development initiatives try to organize producers to bypass traders and market their products directly. But they often run into problems because the pastoralists do not have the skills or linkages necessary, and are not able to take on the risks.

Brokers perform a more subtle function. They bring together buyers and sellers who might not otherwise meet each other. They also reduce the risk of one party or the other cheating: they check the quality of the product and ensure that the buyer is in a position to pay.

Rather than trying to bypass or replace traders and brokers, it makes sense to build their capacity to work with suppliers (the pastoralists) and to market livestock products more effectively. Making the chain more efficient will increase the quality and volume of the products in the chain, and will reduce losses. That is potentially to everyone's benefit, including the pastoralists.

There is another reason to work with traders (and processors, for that matter), even if our real goal is to improve the lives of pastoralists. There are relatively few traders compared to pastoralists. That means that if the traders become more efficient, a much larger number of pastoralists stand to benefit. We return to this issue in Chapter 7.

By building the capacity of traders, development initiatives have an opportunity to replace the traditional adversarial relationship between traders and pastoralists with one of mutual respect and cooperation. It is necessary to change attitudes on both sides: the pastoralists need to see the traders as providing a vital link in the marketing chain, while the traders need to see the pastoralists as valued suppliers who can supply them with a high-quality product.

To do this, traders need a range of skills:

- **Group governance** and managing relationships with suppliers and customers.
- **Selection, care and handling** of animals and livestock products at buying, during transportation and the point of sale. This cuts losses and ensures that a good-quality, valuable product enters the marketing chain and generates profits at each stage in the chain.
- **Marketing** This covers how to identify potential markets and use market information to improve decisions on buying and selling.
- **Negotiation** skills for arranging mutually beneficial transactions.
- **Financial management**, including budgeting, obtaining credit, record-keeping and currency conversion.





**Box 49 Improving market management in the Boucle of Mouhoun region in Burkina Faso**

The livestock breeders' union in the Boucle du Mouhoun region has around 1,200 members. They market their animals at municipally owned cattle markets. But these markets did not function well, making them unattractive places for livestock sales.

SNV helped the market users diagnose the problems, identify solutions, and reorganize the markets. Training was a big part of this intervention. The market management committee, breeders, brokers and traders were trained in management, marketing and simple accounting procedures. The committees now use notebooks to collect information on transactions and to keep track of finances. These records are open to all, increasing transparency and boosting the various actors' trust in the market system.

More information: Tipoco Brigitte Ouedraogo

Several of the cases in this book included capacity building for traders, brokers and market managers. They include the Kenya Livestock Marketing Council (Case 2), the Coopérative Agro-pastorale de Farakala in Mali (Case 6), and the Bassila market in Benin (Case 7). Box 49 gives another example from Burkina Faso.

**Processors** Processors transform the raw product, so adding value to it. Examples are pasteurizing raw milk, cooling it and packaging it; slaughtering animals, butchering the carcasses and producing packaged cuts ready for sale; and tanning hides and turning the leather into shoes and belts. We can also include here things that make the original product more valuable: bulking, grading, quality control, transport and storage.

*Processing workers need specific technical skills.*

Some of the processors are themselves pastoralists; they are organized into cooperatives to process their own products before selling them. Other processors are located further along the chain: in milk-collection centres, dairies, livestock markets, abattoirs and tanneries.

Some of the skills that processors need depend on the product: handling milk obviously needs different skills from turning live animals into joints and sausages. Other skills, such as business planning and management, are more generic.

- **Processing techniques** In milk-collection centres and dairies, this includes milk testing, grading, processing into various products, packaging and delivery. In an abattoir, it means livestock reception, quality control, health inspection, slaughter, butchering, the production of products such as sausages and dried meat, packaging and delivery. In tanneries, it includes the preparation of hides and skins, tanning, and the manufacture of belts, shoes and other products. Often these skills require people to learn how to operate and maintain certain types of equipment. Workers in all three types of enterprise need to learn about hygiene, sanitation and workplace safety.
- **Business management** The managers of processing facilities need skills such as business planning, purchasing, organizing suppliers, marketing, accounting, budgeting and financial planning, record-keeping, customer and personnel management, and compliance with government requirements.

All the dairying projects in this book trained the workers at milk-collection centres and dairies in a range of milk-handling and processing skills. In the case of meat, the Lomidat slaughterhouse in Kenya (Case 8) had its staff trained in various skills. The Tanzania Livestock Marketing Project (Case 4) established the Meat Industry Training Centre to improve the skills of workers in the meat industry, while the tannery project in Maswa, Tanzania (Case 10), focused on training pastoralists to convert previously worthless skins and hides into leather goods.

**Service providers** These include extensionists, animal health workers, bank staff, business service providers, and the staff of local and national government and non-government organizations. These service providers tend to fall into two main groups: people from outside the drylands (from an urban or farming background), and pastoralists themselves.

The first group may have good specialist skills, but they typically have little direct experience of pastoralism or the challenges that pastoralists face. It is necessary to build their understanding of such issues so they can serve pastoralists better (Box 50). Plus, many find the remote drylands an unattractive place to work, so staff turnover tends to be high. Recruiting and training new staff is disruptive and costly.

An alternative is to build the capacity of pastoralists themselves to offer services. Such individuals have a good understanding of the pastoralists and pastoralism, but they tend to lack the technical skills and background necessary to act as a bridge to the non-pastoralist world. It is therefore necessary to train them in such fields. The training of community animal health workers (Chapter 4) is an example of this. And several of the cases in Chapter 8 use this approach; the Ramat project (Case 3) and the Loimidat slaughterhouse (Case 8), for example, have arranged for training in animal health. But even this approach does not eliminate the problem of turnover: many trainees see their newly acquired skills as a ticket to a more attractive job elsewhere.

**Box 50 Training extension workers in dairy goat production in Kenya**

In Nyanza, in western Kenya, Heifer International introduced a dairy goat project. Veterinary extension officers were expected to support the programme. But most of them were not familiar with dairy goat issues. Heifer persuaded the government to cover dairy goat production in detail in training for extension officers.





**All groups** For all groups, it may be useful to offer capacity building in issues such as human health (including HIV and AIDS), gender, nutrition, personal finance and savings and loans.

### Training

Training is the obvious way to build capacity, and many projects do this. But it is by no means the only way – or even the best way. This section looks at training and the alternatives.

**Pastoralists** Arranging training for pastoralists can be difficult for various reasons. There are many of them, and they are scattered across wide areas, coming together only rarely. Many are illiterate or have limited formal education. It can be hard to find trainers who speak their language and understand their situation. Roads are few and electricity is scarce. There are few suitable training facilities in pastoralist areas.

For these reasons, many organizations decide to train pastoralists indirectly. Rather than trying to organize training for pastoralists themselves, they train local capacity builders such as local NGOs and community organizations, which then train the pastoralists. They also train influential intermediaries such as community leaders, chiefs, opinion leaders, local authorities, and radio presenters. These then pass on their new skills and knowledge to the pastoralists they come into contact with, either through formal courses or through informal interaction. The private sector also has a big role to play: traders, input suppliers and financial institutions can pass on information to pastoralists who use their services.

It can be particularly difficult to reach women pastoralists: in many cultures, the women travel less than the men, and it may be unacceptable for male trainers to meet and interact with them.

Training may take place under trees, in a school, church or mosque. The location must be convenient and on neutral territory: pastoralist may be reluctant or afraid to visit each other's "turf".

The training must be relevant to the pastoralists' situation and needs. There is little point in teaching about cooling equipment that requires electricity, for example, if the nearest source of power is several days' walk away. Indigenous cooling systems are more practical. Boxes 54 and 55 illustrate the types of training that two projects have offered to pastoralists.

**Traders and brokers** Training traders and brokers normally takes the form of short courses, aiming to equip traders with specific skills using well-developed tools and guidelines. It is important to invite the right people to attend the course and to agree on the venue and timing. Many traders and brokers have a lot of experience in their field, so training has to be designed to build on this and give them extra knowledge and skills that will make the chain as a whole more efficient.

Valuable topics may include things like linking the traders to credit providers and other services, helping them identify new market opportunities, compliance with grades and standards, business planning and financial management skills. Training should also help traders to realize that it is to their benefit to work together with their suppliers to develop the chain.

**Processors** It is often easier to arrange training for processors than for the other groups we have discussed here. They tend to work in one place (a dairy, abattoir or tannery), which often has been established by the project. Many processing activities follow a set series of steps, use certain

**Box 51 Training young Maasai pastoralists in Kenya**

As part of its efforts to improve livestock marketing, Heifer Kenya's Maasai Animal Health and Livestock Marketing Project supported the training of young Maasai men and women on animal health and business skills. The pastoralists learned a range of topics, including animal husbandry, environment conservation, responsible livestock management, land-use conservation, and gender and HIV/AIDs.

The project set up Ramat Livestock Enterprises to market animals. This company has established a training centre for pastoralists on livestock production and marketing, along with a range of other skills.

More information: Case 3

**Box 52 Training milk producers and collectors to enhance milk quality in Niger**

One-quarter of the milk that arrived at the collection centre in Say was not good quality, so had to be rejected. This was because the producers milked into calabashes and stored the milk in plastic cans that are impossible to clean properly. The milkers did not wash their hands, and the milking enclosure was not clean. Many of the producers live a long way from the collection centre, so the milk would go off in the heat before it arrived.

SNV trained the milk producers and collectors so they could improve hygiene. It taught them to use easy-to-clean metal containers, keep the milk cool by wrapping the containers in wet sacking and putting them in the shade, and to send it to the collection centre quickly. It used a combination of drawings, demonstrations and learning-by-doing.

The quality of the milk arriving at the centre is now better, and only 5% has to be rejected. The producers earn more money. They can now afford to buy feed and other inputs to increase production further.

More information: Case 15

equipment, or follow certain rules (such as hygiene and workplace safety). Processors tend to face a smaller range of problems than (say) livestock producers who must deal with unpredictable variations in weather, grazing, health and markets.

### Other capacity-building techniques

The initiatives in this book use a range of other techniques to build the capacity of producers, traders and pastoralists, often in conjunction with training. We discuss each of these techniques below. Many of the remarks above on training also apply to these other techniques, so we will not repeat them here.

**Coaching** This is commonly used to follow up on the training to ensure the acquired skills are used properly. They can be done at homesteads and in small community groups. The facilitator observes how things are done and helps the people involved to correct any errors. This is useful in maintaining hygiene, for example, or in preparing animal feed. It is also useful to help pastoralists improve their skills in things like record keeping and animal breeding.

Coaching is particularly valuable as the advice can be tailored to the situation and needs of each individual. But the big disadvantage is the cost: working on a one-to-one basis with individuals is time-consuming, especially if they are scattered over a wide area. That makes it impractical for most types of capacity building. It is most appropriate where the activity is concentrated in one





**Box 53 Demonstrations and coaching in pastoralist field schools, Turkana and Pokot counties, Kenya**

Deteriorating pastures in parts of Turkana and Pokot counties in northern Kenya meant less feed and lower-quality livestock. Terra Nuova, Vétérinaires sans Frontières-Belgium and the Lomidat slaughterhouse formed field schools to train pastoralists how to grow fodder, make hay bales, and produce fodder seeds.

The field school members set up fodder banks and produced seeds of these species for distribution. The harvested seed was sown during the rains in different locations where the grasses would be expected to regenerate naturally. The seed from these new areas was then sown in more new areas to help spread these desirable species.

More information: Case 8

place, such as an abattoir or dairy, and the coaching can be combined with training, inspections and other activities.

**Demonstrations** Because many pastoralists are illiterate, demonstrations are a useful way of imparting knowledge and skills. They are useful for practical skills such as record keeping, the preparation of animal feed, milking, storage of milk, and the use of local and introduced technologies. The demonstrations may be carried out by the facilitator or by participants themselves. They can be combined with other capacity-building methods, including training, coaching, and exchange visits.

**Exchange visits** This approach is useful where there are two groups, one of which is advanced in knowledge, skills and results. The less knowledgeable group visits and learns from the advanced group. Exchange visits can be highly motivational as they increase the confidence of both groups and equip them with an "I can make it" attitude. The visits can be arranged within the same locality or other localities, depending on the time and budget available. Successful visits require a clear goal for learning, a schedule, a set of activities, and a facilitator to guide discussions and explain concepts and events. The facilitators may be outsiders or come from the host community. It is important for the visitors to reflect on their visit and decide what they can do when they are back home. The visits can be backed up with training, coaching and demonstrations.

**Exposure visits** Producers, traders and processors can learn a great deal through visits to markets, dairies, abattoirs, potential customers, banks, breeding farms, trade fairs and research institutions. They can gain an idea of what happens to their animals or milk further along the marketing chain, and come to understand the needs of the processors, buyers or consumers. They can learn about opportunities and services that they can use, such as how to get credit or obtain information on prices and demand. Such visits can introduce them to potential business partners and build links with services such as research, finance and market information. Visits can combine a tour of facilities (a dairy or abattoir), interviews with managers and staff, presentations and question-and-answer sessions. It may be useful to have participants go through an exercise, such as asking them to find out prices or to conduct some market research.

**Community radio** Radio is a powerful and unifying tool especially if the presenters speak the local language and address local problems. Community radio often resonates better with local listeners than commercial radio. Various programming formats can be used, including educational programmes, interviews, short spots similar to advertising, regular features such as a listing of the

day's prices, etc. Radio can be complemented by printed materials such as photographs, brochures and audio recordings for use in training.

**Local resource centres** A community resource centre offers advice and other services to pastoralists and other clients. The advice may cover a wide range, from market information to production techniques and early warning of drought and disease outbreaks. The centre may also sell equipment and inputs such as feed and medicine, and offer veterinary and vaccination services. It may produce and distribute simple extension manuals and offer training courses.

Such extension centres are often government-run, as in Ethiopia. They may also be privately run, as is the Sidai chain of livestock service centres in Kenya (Box 17), or the Ramat training centre in Kenya (Box 51).

Unlike most of the other capacity-building interventions, such resource centres are permanent institutions rather than short-term interventions. That means they require continuous funding. This can be a problem: staff, rent, transport, equipment and supplies all have to be paid for. Most such centres rely on a combination of donor funding, user fees and sale of products to support themselves (Wongtschowski et al. 2013).

### Recommendations and lessons

Marketing initiatives may aim to improve existing activities, help people get services, and add to their current production and marketing activities. Or they may establish entirely new functions, creating new full- or part-time jobs. The capacity-building requirements will depend on which of these approaches is used.

Attempts to build capacity should build on the knowledge and skills that people already have. A participatory needs assessment should identify these capabilities, and point out gaps to be filled.

Different actors have different capacity needs. Pastoralists generally require skills in livestock production, finance, communication, business, marketing, organization and leadership. Traders and brokers may need skills in group governance; the selection, care and handling of animals and livestock products; marketing, negotiation and financial management. Processors typically need to gain technical and business-management skills. Depending on their background, service providers may need to gain an understanding of the pastoralist production system, or learn technical skills. For all groups, it may be useful to build their capacity in health, gender, nutrition, personal finance and savings and loans.

It is difficult to reach large numbers of pastoralists directly. It may be more appropriate to work through intermediaries such as local NGOs, community organizations, local leaders, chiefs and radio presenters. It may also be possible to work through traders or processors who buy the pastoralists' products.

## ORGANIZING ACTORS

Pastoralists already are organized into various networks and clans – some of which deal with marketing. For example, many Somali women milk producers supply milk to a chain of collectors and retailers who bulk the milk, arrange for it to be transported to town, and sell it there. Some, but by no means all, of these relationships are based on family ties; many are based on mutual trust between business partners who are not related to each other, and who may not even know each other (LPP et al. 2010 p. 104).



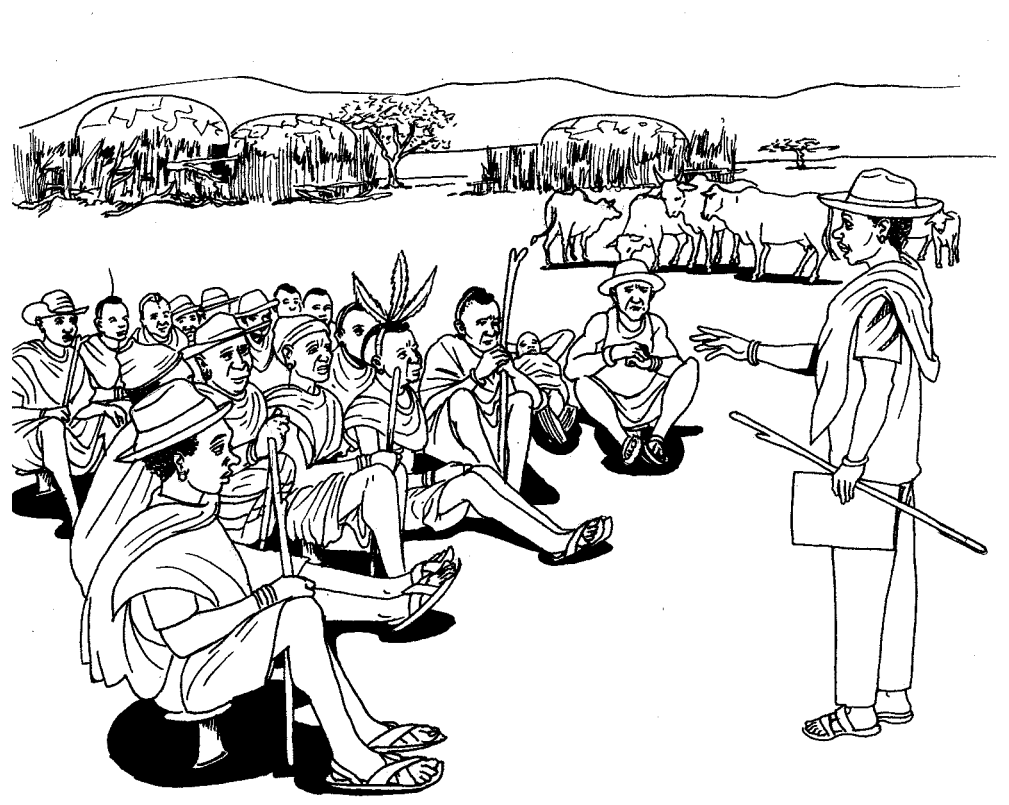


Nevertheless, indigenous organizations are often inadequate or impose restrictions that impede marketing. In Kenya, for example, traditional rules prohibit the bulking of milk from two different clans. The sale of animals may have to be approved by clan elders. That makes it hard for individual pastoralists to manage their livestock as an enterprise.

In common with many rural development initiatives, the cases in this book relied heavily on organizing groups of pastoralists (as well as traders and processors) to improve the production and marketing of livestock and livestock products. Even where an initiative focused mainly on establishing a dairy or abattoir, it still formed groups of producers to supply it, rather than to rely on relationships with individual suppliers.

### Why organize?

Why do development initiatives rely so much on organizing beneficiaries into groups? It's basically a question of "economies of scale". That is economic jargon for the idea that it is cheaper and easier to do things at a big scale than at a small scale. It is in the interests of various actors – processors and traders, pastoralists, the government and service organizations – to ensure that pastoralists are organized for marketing.



*Organizing groups has many benefits for the group members themselves, for other actors in the marketing chain, and for the government and development organizations.*

**Benefits for group members** Pastoralists (and processors and traders) can gain in many ways from getting organized. By selling in bulk as a group rather than small amounts as individuals, they can negotiate higher prices and supply a wider range of buyers. They can serve markets that they would not otherwise be able to reach: a dairy is not interested in buying a few litres of milk from each of hundreds of dairy producers, but will be interested in buying in bulk from a group. Being part of a group makes it possible for individuals to comply with the demands of high-value urban and export markets.

Being in a group makes it possible for the members to share tasks. They do not all have to take their milk to the market every day; one person can collect the group's output and take it to town. That saves time and money, and frees everyone else to do other things. It also makes it possible for individuals to specialize on what they are good at: selling, keeping records, taking care of the animals' health, etc. Or the group may hire a specialist manager to take on such tasks.

Marketing together can open up new possibilities for adding value to the product by processing it. There is little point in turning a single cup of milk into butter; but put it together with everyone else's milk, and you have enough to make a good amount of butter that is worth selling. It may even be worth setting up a dairy by investing in bulking, testing, chilling and packaging equipment.

Group members can get services that are open only to groups, or that require a certain amount of capital. They can apply for credit from microfinance institutions (or form their own savings group), get advice from extension services, and pool their savings to invest in equipment or a vehicle.

Sharing is another benefit. The members can share information and experiences, draw on each other's expertise, help each other, and learn from each other. They can encourage and support each other, making it possible to improve how they produce and market their products. A group of traders, for example, can support each other with market information, or work with the government and producers to make a marketplace function more efficiently.

A group has a more powerful voice than its individual members. The group can negotiate with buyers, input suppliers and service providers, and can lobby the government.

**Benefits for other actors in the marketing chain** Other actors in the marketing chain can also benefit when their trading partners get organized. An abattoir needs a regular supply of healthy animals of the right type, age and weight. While some pastoralists have big herds, they may not want to sell a lot of animals at the same time. One way to get a regular supply of animals for slaughter is to organize the pastoralists into groups, so each member delivers a certain number of animals on an agreed date.

Dairies face a similar problem. They need a regular supply of good-quality raw milk. It would be impractical to pick up small amounts of milk from each producer; instead, the dairy gets producers to bring their milk to a central collection point in each village, where it can be tested and picked up.

Similar considerations affect livestock traders, who find it expensive, time-consuming and risky to travel from farm to farm and from encampment to encampment, in search of a few animals to buy. By arranging purchases from an organized group of producers, they can save time and money, and be assured of a supply of good-quality animals.

Organizing their suppliers brings other advantages for processors and traders. They can somewhat even out the drastic seasonal fluctuations that afflict the supply of animals and milk in dryland areas. They make it possible to train producers in improved production methods, quality, animal health, and other issues. That can increase both volumes and the quality of product.





But if producers get organized, that may bring disadvantages for processors and traders. The producers may demand higher prices without making corresponding improvements in their product quality, quantity or reliability. They may demand services such as credit and transport. They may choose to sell to someone else. For these reasons, processors and traders need to consider carefully whether it is in their interests to support the producers to get organized. Often the benefits are long-term and not obvious, while the shortcomings are clear and immediate.

**Benefits for the government and service organizations** The government and service organizations such as development agencies, research institutions, extension services, credit agencies and business service providers find it difficult and expensive to serve large numbers of widely scattered, poorly educated pastoralists. If the pastoralists are organized, providing them with services becomes a whole lot easier. The pastoralists' group becomes the intermediary through which these services can be supplied. Development organizations can offer their members training. Financial institutions can provide them with credit (with repayments guaranteed by the group as a whole). Business service providers can arrange marketing, information services and input supplies. The government has a partner with which it can negotiate, and through which it can announce and implement new policies.

### Types of organizations

The function of a group determines its size, membership and level of organization, and sets the group's relationship with the state and other stakeholders. For example, if the organization is to bulk meat for export, it needs a large number of members, a wide scope to maintain a reliable supply, and strong ties with the government and other actors. A local group of dairy producers that bulks milk has a much smaller scale.

We can identify various types of groups in the production and marketing of pastoralist products (Figure 12). Each performs a different role, though in practice there is considerable overlap among these types.

**Single-actor groups** These groups are made up of one type of actor at a single stage in the marketing chain: producers, processors or traders. They make it possible for their members to obtain inputs, produce more efficiently, market their produce, save money, and exchange information. They may be based on existing or traditional groups (often made up of relatives or clan members), or be newly organized. Some examples:

- **Milk-collection groups** The women's milk-marketing cooperatives in Ethiopia (Case 11) are based on traditional *faraqa annani* groups. They collect milk from their members and sell it to consumers.
- **Livestock marketing groups** Herders get together to market their animals as a group. The higher volumes and solidarity give them greater bargaining power when negotiating with buyers. The Uganda Meat Export Development Programme (Case 5), organized pastoralists into beef-producers' cooperatives.
- **Processing groups** These include the tannery cooperatives in Tanzania (Case 10) and dairy cooperatives in Uganda (Case 13), Burkina Faso (Case 14) and Niger (Case 15). Some of these already existed; others were set up by the projects described in this book.
- **Savings and credit groups** These may be stand-alone groups or part of groups that have other functions, such as marketing or the purchase of inputs.

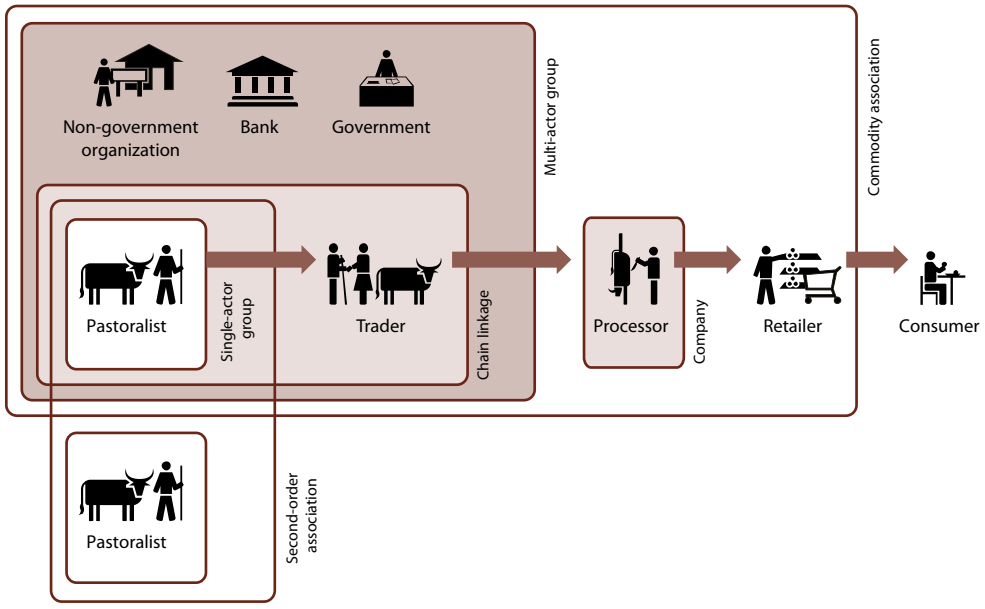



*Figure 12 Types of organizations in pastoralist marketing*

These groups may focus on a single type of activity (such as collecting and marketing milk), or they may provide a range of services to their members (savings, loans, input supplies, bulking, quality control, marketing, etc.).

The groups may be informal or formal (with a constitution and bylaws). Registering as a cooperative brings various advantages: it gives the group a legal identity, allows it to apply for a bank account and credit services, makes it easier to transact business on behalf of its members, and makes it possible to hire staff and own facilities.

Cooperatives are popular in development projects and the government as a way of managing enterprises. There are three main reasons for this:

**Because of the logic of production** Where a number of producers each have only a small amount of milk or a few animals for sale, they can earn more by collaborating in marketing or processing their product. Forming a cooperative is an obvious way of formalizing such an arrangement. This was the case for all four cases describing milk-production groups: the *faraqa annani* groups in Ethiopia (Case 11), the East Africa Dairy Development Project (Case 13), Socoprolait in Burkina Faso (Case 14), and the milk-collection centres in Niger (Case 15), as well as the tanneries in Tanzania (Case 10) and the livestock marketing cooperatives in Uganda (Case 5).

**As a way of conferring ownership on local people** Some enterprises could very easily (and perhaps more efficiently) be run as a private enterprise or even by the government. But donors prefer to confer ownership on local people, organized into a cooperative for this purpose. The enterprise itself is typically incorporated as a company owned by the cooperative. This was the case for the Lomidat slaughterhouse in Kenya (Case 8).

**To encourage investment and commitment by local people** Cooperatives have the possibility of raising capital from their members by charging membership fees and by selling shareholdings. But not enough can be raised in this way to pay for land or expensive equipment.





They therefore rely on donor or government support for these items – as in the Lomidat slaughterhouse in Kenya (Case 8), the tannery cooperatives in Tanzania (Case 10), and Socroprolait's dairy in Burkina Faso (Case 14). Even though they raise relatively small amounts of money, membership fees and shareholdings are good ways to encourage members to feel that the cooperative is theirs. If people feel they own the cooperative, they will feel responsible for it: they will use it to market their produce, participate in meetings and help make it a success.

These three rationales are not mutually exclusive: many of our cases have elements of all three.

While they are popular, cooperatives have their own problems. Starting a cooperative means organizing members, creating administrative structures and procedures, training leaders and managers, and ensuring the members understand the commercial logic. Corruption, a lack of commitment, side-selling and sustainability are all potential problems. It may be necessary to hand-hold a cooperative for several years before it can stand on its own. Development agencies put huge amounts of effort into such activities.

Running a cooperative among mobile pastoralists is a particular challenge: it is impossible to hold regular meetings, for example, if the members are scattered widely. For this reason, most pastoralist cooperatives are based around a fixed facility, such as a milk-collection point or abattoir. Their activities may be highly seasonal, coinciding with periods when the producers have a surplus to sell and are in the vicinity.

**Second- and third-order associations** These consist of several primary cooperatives, grouped together as a regional association or a national union. They provide services that individual cooperatives cannot, such as large-scale marketing, negotiation with large trading partners, and bulk purchases of inputs. Some examples:

- The Uganda Meat Producers Cooperative Union Ltd, which is composed of 33 livestock producer cooperative societies from different parts of Uganda, including from pastoral areas (Box 54).
- The Regional Union of Livestock and Meat (URFBV) groups several livestock cooperatives in the Sikasso region of Mali (Case 6).

Several second-order unions can unite to form a federation or alliance to facilitate information flow and to lobby policymakers. These are often advocacy and lobbying platforms rather than business organizations. Some set regulations governing the conduct of their members.

*Groups of producers have more bargaining power than individuals.*

**Box 54 Uganda Meat Producers Cooperative Union Ltd.**

Livestock producers in various parts of Uganda have organized themselves into primary cooperative societies. The producers run and manage these cooperatives themselves. They encourage savings, mobilize inputs and services, and run veterinary shops.

To increase their members' income, 33 of these cooperatives have formed a national union, the Uganda Meat Producers Cooperative Union. This gives the members "free" veterinary, extension and market information services. It buys animals from both members and non-members, and provides artificial insemination and vaccination services, and trains members on record keeping and business skills.

The union lobbies the government in support of the livestock keepers, and helps develop standards for meat. It has also been able to attract investors and development institutions to enhance livestock production. The union invests its profits in land and an abattoir to produce meat for export.

The union is a member of the Uganda Cooperative Alliance.

More information: Case 5

- The Uganda Cooperative Alliance is an alliance of cooperatives from the credit, livestock and livestock products sectors.
- The Ethiopian National Dairy Forum, founded in 2010, focuses on dairy issues.
- The Federation of Livestock and Meat Interprofessional Groups (FEBEVIM) in Mali does many things, including collecting, analysing and disseminating market information for its district-level members (Box 4).

In a cooperative, the members elect a committee that either manages the organization directly or appoints a professional manager to do so. That has advantages: it means the management is accountable to the members and (in theory at least) operates in their best interests. But it can also be cumbersome: changes have to be approved by the members, making it difficult to be nimble when quick decisions are needed. And laws in many countries restrict what a cooperative can and cannot do.

**Companies** A company is a more flexible form of organization: the management is appointed by a board of directors who represent the owners (the shareholders). The managers have more freedom to make decisions, and the company can aim to make a profit – an important incentive to increase efficiency and cut costs.

Our cases include several such organizations, all engaged in processing:

- Ramat Livestock Enterprises markets livestock in Suswa, Kenya (Case 3). It is owned by two local development organizations, the Loita Development Foundation and the Keekonyokie Suswa Trust, which hold 45% of the shares each. Heifer Kenya, the international development organization that supported its establishment, retains 10% of the shares.
- The Lomidat Pastoral Multipurpose Co-operative Society, which runs the Lomidat slaughterhouse in northern Kenya (Case 8), is a hybrid of a cooperative and a company. While it was established with donor funds, it is owned by the 1,600 cooperative members who have bought shares and who earn dividends when it earns a profit.
- The Uganda Meat Farmers Company Ltd, set up by the Uganda Meat Export Development Programme (Case 5) is a public-private partnership that runs an abattoir. Pastoralists own 51% of the shares.





All these companies were set up through the project concerned. Our cases do not include any examples of a project working with an existing local private company.

**Chain linkages** These are relationships between actors in the marketing chain who buy from and sell to each other, and with service providers such as microfinance institutions. They may be informal, ad-hoc relationships between, say, a group of pastoralists and a trader. Or they may be more formal: for example, a dairy may sign a contract with producers' organizations for a regular supply of milk. Some examples:

- In Ethiopia, the RAIN project linked traders to feed suppliers and abattoirs (Case 1).
- Also in Ethiopia, the system of keeping milking camels in town has given rise to links between the camel owners, local farmers who grow forage, and milk retailers (Case 12).
- The Lobatse abattoir in Botswana has various credit arrangements to source animals from pastoralists (Case 9).

**Multi-actor groups focusing on a single step in the market chain** These groups bring together two or more types of market chain actors: the sellers and buyers in a particular transaction, perhaps along with the government, financial institutions, business service providers, etc. They aim to make a particular type of transaction more efficient, increase volumes and quality, and reduce waste. Some examples:

- **Milk-collection groups** that collaborate with livestock cooperatives or dairies (the Eskunfalan and Lesitu Annani Gorbo cooperatives in Ethiopia, Case 11; and AREN and Hawrindé Biradam in Niger, Case 15).
- **Market-management committees** Examples are the marketing associations organized by the Kenya Livestock Marketing Council (Case 2), and the joint market management arrangements in Mali (Case 6) and Benin (Case 7).

**Commodity associations** These are broader assemblages of actors, including pastoralists, traders, processors, retailers, consumers, business service providers, financial services, and the government. They look at the commodity chain as a whole and try to find ways to make it more efficient to benefit everyone. Such commodity associations have various advantages:

- They promote the fair distribution of added value among the different categories of actors.
- They make it possible for the sector to regulate itself in terms of price, quality and quantities.
- They improve efficiency by enhancing communication and information exchange at different levels.
- They allow for negotiation, lobbying and advocacy with government.
- They make it possible to brand products or promote them commercially.
- It is easier to manage one commodity rather than several at a time.

However, such associations often face problems such as:

- Pastoralists' interests are not always taken into account. Processors and traders may come to dominate the group.
- It can be difficult to fund the association in the long term.
- To ensure fairness, the government can participate and have a moderating role, but it must not drive the process.

An example of such an association is the Kenya Livestock Marketing Council (Case 2).

**Box 55 The Renaissance Livestock Network in Uganda**

In January 2012, a dozen livestock producers in Uganda started a network to exchange information and skills. Four times a year, the network members visit one of the members: a different member each time. The network has also involved some livestock raisers in neighbouring Rwanda and Burundi.

More information: Alex Kamugisha, reline@fiesta.cc or ruhombej@hotmail.com

**Networks** These are formed by individuals or groups in different locations to exchange information rather than to manage trade. The Renaissance Livestock Network in Uganda (Box 55) is an example of such a network.

**Innovation platforms** An innovation platform is a group of individuals (who often represent organizations) with different backgrounds and interests: livestock keepers, traders, food processors, researchers, government officials, etc. The members come together to diagnose problems, identify opportunities and find ways to achieve their goals. They may design and implement activities as a platform, or coordinate activities by individual members (CGIAR 2013). Box 62 in Chapter 7 gives an example of such a platform.

### Who owns? Who manages?

Where development initiative helps create a facility such as an abattoir, dairy or market, it faces a choice: who should own and run it? Our cases illustrate several of the choices. We have discussed cooperatives and companies above. Here are some other possibilities.

**Individual entrepreneurs** Development projects rarely seem to work directly with individuals. Reasons for this include equity (a fear of giving unfair advantages to a few lucky individuals), cost (it is more time-consuming and costly to deal with lots of individuals rather than groups – if the groups already exist), and impact (training a group is likely to have a bigger effect than training a few individuals).

But for certain activities, it may be more appropriate to work with individuals than with groups.

- The RAIN project in Ethiopia (Case 1) provided traders with credit, making it possible for them to buy animals from pastoralists during the drought.
- In Kenya, Ramat Livestock Enterprises (Case 3) trains young Maasai as traders; they buy animals from pastoralists and sell them through the marketplace that Ramat runs.

In both of these cases, the individuals occupy a key place in the marketing chain: they buy animals from large numbers of pastoralists, so influencing what they do will automatically affect everyone they buy from.

Our cases do not contain any examples of ownership of a facility being conferred on individuals. This approach has been tried in other fields, however: an AGRA-funded project in northern Ghana identifies local businesspeople to own and manage grain warehouses, while another AGRA project in Mozambique has individual entrepreneurs operate threshing equipment (KIT and AGRA 2013). These individuals are selected by the community and have to agree to strict rules – for example, they are not allowed to sell the equipment. There is no reason such approaches could not be tried for pastoralist products.





**Government** The development project (or the government itself) may set up a facility, to be owned and run by the government, or by a government-owned parastatal organization. This is common for larger facilities such as abattoirs, and those with national significance, such as training institutions and border marketplaces.

- The Lobatse abattoir in Botswana (Case 9) was established by the colonial government in the early 1950s, and is still owned by a parastatal organization, the Botswana Meat Commission.
- The Kenya Meat Commission, founded in 1950, runs the country's largest abattoir, in the town of Athi River, near Nairobi. It runs a second abattoir in Mombasa, along with depots and distribution facilities.
- The Tanzania Livestock Marketing Project (Case 4) built a large number of livestock markets and other facilities, including an abattoir and a training centre. The government retains control of the markets, but the abattoir has been privatized. The training centre is controlled by an autonomous government-owned body.

However, experience shows that governments are not very good at running commercial operations. Civil servants are often not able to make the commercial decisions needed to manage an enterprise properly. The government may interfere, for example by requiring an abattoir to buy emaciated animals at a loss during a drought, or using profits as a source of funds but failing to invest in the enterprise. Corruption is also a problem in many government-run operations. The Kenya Meat Commission, for example, has a history of poor management and financial instability. It was closed for 15 years because of mismanagement, reopening only in 2006. In 2013, the commission went into crisis again because of high debt levels.

**Local authority** The national government may operate large-scale enterprises of national significance. Smaller-scale, local facilities, especially public infrastructure such as livestock markets, are sometimes run by the local authority. Indeed, three of the four cases in this book that concern marketplaces have local authority involvement. They illustrate some of the advantages and problems that local authorities face in managing such facilities:

- They often lack the expertise and funding to manage the markets they own. The Co-management of Livestock Markets in Kenya project (Case 2) tried to improve how markets are run by involving user representatives in the management. The idea is that the people who use the market have a better idea of what is needed, and what will work, than a civil servant.
- On the other hand, they offer stability and the opportunity to tap into government funds. That was why the donor insisted that the local authority, rather than a cooperative, own a market constructed in Farakala, Mali (Case 6).

Even if it does not own or manage a market, the local authority can provide vital support in the form of a land allocation, favourable decisions, and expertise. Or it can hinder a project it does not like. So is it important to involve the local authority throughout, as in the cooperative-run market in Bassila, Benin (Case 7).

**Joint ownership and management** Several of the cases exhibit hybrid arrangements where two or more types of organization own or manage a facility. These include:

- **Public–private partnerships** The Uganda Meat Export Development Programme (Case 5) built an abattoir, which is run as a public–private partnership, with pastoralists owning 51% of the shares.

- **Joint management committees** The local livestock markets in Kenya (Case 2), Mali (Case 6) and Benin (Case 7) are all run by committees that include the local authority and representatives of the market users.
- **Board memberships** By retaining a nominal shareholding and seat on the board, donors can help guide cooperative-owned enterprises through their first few years of operation. An example of this is Heifer Kenya's 10% stake in Ramat Livestock Enterprises (Case 3).

### Who organizes?

Various actors may take the initiative in organizing groups. In most of our cases, it was **NGOs or development projects** that brought individuals together and introduced them to the idea of forming an organization. While NGOs and other development organizations have a lot of expertise in community organizing, they suffer from the problem of short-term funding: once the project is over, there is no one to continue to provide the support that newly formed cooperatives need. Sometimes a follow-up project can help a group that has not yet managed to become self-sufficient. This happened in the case of the Hawrindé Biradam milk collection centre in Niger: established under a prior project, it was operating well below capacity until SNV helped reorganize it (Case 15).

**Governments** are more permanent partners – though they may also rely on short-term donor funding for development projects. They helped form organizations in at least two of our cases: the Tanzania Livestock Marketing Project (Case 4) and the Uganda Meat Export Development Programme (Case 5). Both of these were large-scale government-led initiatives supported with donor funding. But Africa has a long history of failed government initiatives to promote cooperatives: such efforts have often been heavy-handed, and pastoralists are understandably suspicious of them.

Other **marketing chain actors** may also help pastoralists get organized. In Botswana, the Lobatse abattoir organizes pastoralists to supply it with animals (Case 9). So too do the Lomidat slaughterhouse (Case 8) and Ramat Enterprises (Case 3) in Kenya. In each of these cases, the actor doing the organizing is the pastoralists' main customer, so occupies a key position in the marketing chain.

Finally, **group members** themselves may organize themselves without any outside assistance. This occurred in the urban camels case in Ethiopia (Case 12). Such arrangements tend to be informal and haphazard – but more flexible and perhaps more sustainable than the more formal arrangements.

### How to organize?

Organizing pastoralists for marketing faces particular challenges. We have referred to many of these already: the vast distances and poor infrastructure in dryland areas, the mobility of the target groups, the seasonality of production, the clan structure prevalent in many areas, the low levels of formal education, pastoralists' suspicion of outsiders, and the cultural difficulties of working with women (see the section on *Gender* below). Nevertheless, here are some tips.

**Begin with those who are interested** That is most likely to be poor pastoralists who do not have access to market. They can increase their opportunities and income if they are organized as a group. For example, the owners of a few dairy cattle quickly see that by bulking their milk they will be able to sell it.





But it is not always the smallest-scale producers who are most interested. Pastoralists with a small herd may want to sell animals only in an emergency. Owners of larger herds may be more interested in joining a group because they are more cash-oriented and see the possibility of increasing their income.

Individuals who are not interested in working together should not be forced to join a group. This has particularly been a problem with cooperatives formed by government initiatives. The basis for forming groups and cooperatives should be the common interest of the members, not a government target or a donor's need to achieve a project goal.

**Build on existing groups where possible** Pastoralists have a unique way of living and may not share a common interest with other people. Traditionally, pastoralists are organized along kinship lines into tribes and clans. Development initiatives need to consider the dynamics of these groups. Interventions should not collide with customs and tradition, but should take them into account and build on them where appropriate – for example by planning milk-collection routes and siting collection centres accordingly.

Where traditional self-help groups exist, it may be best to build their capacity in production and marketing, rather than trying to found entirely new groups. On the other hand, an existing group may be unsuited for marketing; in such cases it may be better to start a new group from scratch.

**Pay attention to socio-cultural dimensions** Consider gender, age, and social and cultural norms when forming groups. For example, pastoralist women tend to refrain from participating in social activities. It may be better to form women-only groups than to insist on mixed groups. Try to give opportunities to women, young people and the disabled who lack opportunities in society to help them realize their potential and improve their chances in the market.

Development workers who help groups get organized need a good understanding of the local culture, informal laws and tribal rules. They must also understand how people communicate with each other. Pastoralists and traders have long-established ways of disseminating information. In Afar, northern Ethiopia, for example, any passer-by is called upon to sit and pass on messages from people elsewhere. Clan leaders use this system, known as *dhagu*, to transfer information to everyone in their clan relatively quickly through word of mouth. It is also a useful way to reach illiterate community members.

**Provide the right skills** Marketing groups need a range of skills: leadership, transparency, group organizing, constitutions and bylaws; a knowledge of formal laws; financial management, record keeping and business planning; technical knowledge about production and processing; an understanding of their markets; and communication.

**Build sustainable groups** For groups to be sustainable, good organization alone is not enough. Groups also need a reliable source of income, which they can sustain and develop further after the development intervention has phased out. That means a clear business model, a business plan that enables them to earn a profit, the ability to put the plan into practice, and the ability to adjust it as required.

Many groups, especially those that are formed in a top-down manner, fail to offer their members clear benefits. The group ends up benefiting a few members only, often those who are in control. To avoid this common problem, the group has to offer clear advantages to its members: higher prices for their products, extra convenience in selling, or low-cost inputs. Without such incentives, members will be unwilling to pay their membership dues or sell through the group. Over time, the group will dwindle and die.

### Recommendations and lessons

Organizing groups along the livestock and product marketing chain can make the allocation of resources and the distribution of profit more efficient. Groups can address the common issues faced by individual pastoralists. Efforts to organize them should be directed towards enhancing pastoralists' abilities to find the best solutions to their problems and finding ways to deliver services cheaply and efficiently

Such efforts should also try to reduce their vulnerability vis-à-vis the wider society, and provide a platform to help them make their voices heard. Special attention is needed to reduce the marginalization of women, youth, disabled people and the elderly.

The most appropriate form of management and ownership of a facility will depend on the particular situation. Where possible, the users of the facility should have a stake in the ownership and management. But cooperatives are hard to establish and sustain. Development initiatives should consider alternatives, including helping individual entrepreneurs set up and run facilities. Often, a hybrid arrangement, such as joint ownership and management, may be the best approach.

## GENDER

Women pastoralists play an important role in livestock production. In many places, it is the women and girls who look after the household while the men and boys are away tending the herd. They look after pregnant female animals and their calves, kids and lambs, and take care of sick animals that cannot keep up with the main herd. They milk the lactating animals and make sour milk and butter: important parts of the diet of many pastoralist families.

These generalizations do not apply everywhere: there is a large amount of variation among production systems and ethnic groups regarding who owns the animals, who takes care of them,

*Begin with those who are interested in improving their production and marketing.*





who sells the products, and who gets the money. All kinds of combinations occur. In some societies, for example, women are not allowed to milk at all, or they are responsible for only some types of animals. In other instances they may own and milk a certain type of livestock but not trade their products. Elsewhere, they may be the main traders, while production is men's work.

The role of women is also changing. Trends include:

- The increasing number of men who spend large amounts of time working in the cities
- The rising number of households that are headed by women as a result of such migration, or because of the AIDS epidemic
- The increasing demand for milk in the cities, opening up opportunities for small cooperatives
- Women's increasing responsibility for managing sheep and goats.

### Marketing challenges for women

Nevertheless, pastoralist women face huge challenges in producing and marketing livestock products. In some societies they are prohibited from travelling without their husbands and interacting with men who are not close relatives. They may be tied to the home by a string of household duties: cooking, cleaning, fetching water, looking after children and the elderly. Men make the big decisions. They have the sole right to sell animals, and so control the income.

If parents send their children to school at all, it is often the boys that go. The poorly educated daughters are married off young. In numerous societies, women are traditionally not allowed to own or inherit assets such as land and animals. Where services such as extension and credit address pastoralists at all, they tend to be geared towards men rather than women. Women are rarely members of groups, and they have little say in organizations dominated by men. They learn few marketing skills, and get little information about marketing. Women are neglected in livestock and trade policies because trade liberalization tends to focus on exports.

### Improving gender equity

Governments and development organizations have recently come to appreciate the importance of including women in livestock marketing interventions. Eight of the 15 cases in this book mention women; one (the *faraqa annani* milk-marketing groups in Ethiopia, Case 11) dealt with women-only groups. In some of the other cases that mention them, women were either the majority of the beneficiaries – as in the Lomidat slaughterhouse in Kenya (Case 8) and the urban camels story from Ethiopia (Case 12). In several they were a minority, for example in the Ramat story in Kenya (Case 3), the Uganda Meat Export Development Programme (Case 5), and the Farakala dairy in Mali (Case 6). Even if they were a minority, it is encouraging to note that the interventions targeted women and gathered gender-related information about the beneficiaries.

Not surprisingly, women figured prominently in the cases dealing with dairying, and less so in those concerned with live animals and meat. This stereotype should not be taken too far, though: women are three-fifths of the members of the Lomidat Pastoral Multipurpose Co-operative, which supplies animals to the Lomidat slaughterhouse in Kenya (Case 2). And in the Uganda Meat Export Development Programme (Case 5), the number of women selling cattle rose from zero in 2008 to 250 in 2012.

### Five strategies to improve gender equity

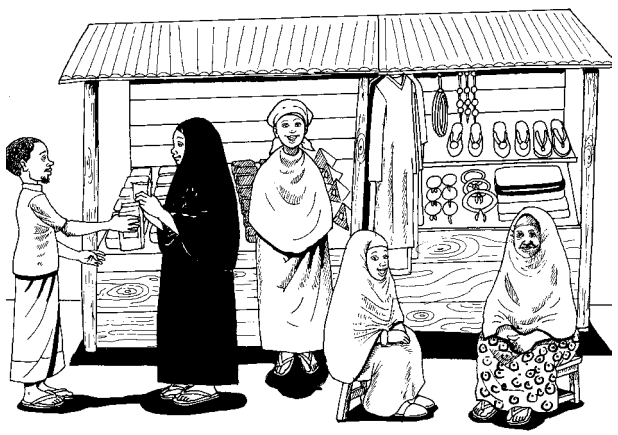
KIT et al. (2012) identifiy five broad strategies for improving gender equity in marketing chains:

- **Building on tradition** Most of our cases that mention women fall into this category. Pastoralist women already are involved in producing livestock and (especially) dairy products, so it is relatively easy to expand their involvement in this area. Box 56 gives another example of this approach.
- **Creating space for women in male-dominated chains** One case (the Maasai Animal Health and Livestock Marketing Project in Kenya, Case 3) trained both young women and men pastoralists as entrepreneurs to source animals from producers for sale at the Ramat market. However, none of the cases reports about women going into previously male-only activities (butchering or live-animal export, for example).
- **Organizing for change** The *faraqa annani* milk-marketing groups in Ethiopia (Case 11) are the only instance where women-only groups were used to promote women's interests. In other cases, groups were mixed.
- **Standards and certification** This covers labelling products as "made by women". None of our cases used this approach.
- **Gender-responsible business** This refers to special efforts to promote women in a company. In Socroprolait in Burkina Faso (Case 14), a woman now manages the dairy.

### Four dimensions of gender in marketing chains

KIT et al. also identified four dimensions of gender equity: agency, structure, activities and governance.

**Agency** This is a woman's (or man's) individual capabilities. The initiatives aimed to improve these through training in various skills. Training can be designed specifically for women, and offered at times and in places that are convenient for them. Skills include both traditionally "female" subjects (such as livestock health, milk hygiene and dairying) and subjects more usually aimed at men (such as financial management and improving understanding of the market). Because many pastoralist women are illiterate, literacy training and efforts to promote girls' education can have a big, though longer-term, impact.



*One way to improve gender equity is to build on areas where women are already active.*





**Box 56 Making *wagashi*: Improving dairying skills among Peulh women in Benin**

Milk is important in Peulh households in Benin: it is both a source of food, and the women sell it to pay for things like clothes and household expenses. Because it is highly perishable, they turn it into a type of cheese called *wagashi*. This is traditionally made by coagulating the milk using *Calotropis procera* (a fruit with a bitter sap). More recently, it has been made using CECALOP, a coagulant powder produced by researchers at the National University of Benin. But inadequate hygiene, low quality and poor marketing have harmed the image of *wagashi*, and its price.

SNV has helped train women in production techniques and has provided them with various small items of production equipment to improve the quality and presentation of their product. This has led to a 25% price rise for *wagashi* and faster trade in this product. The introduction of CECALOP has made it possible to make 20% more cheese from each litre of milk.

More information: Albert Houedassou

**Structure** This means the institutions that limit or create opportunities for individuals. Such institutions include the attitudes of men towards what women are permitted (or not permitted) to do, customary laws, and government policies. There are various ways of changing these: sensitizing men (and women) to expand their view of acceptable activities for women (and men); using the mass media to promote gender equity; lobbying government to change laws restricting women's ability to own and inherit land and animals; encouraging elders to promote women's interests; and encouraging the registration of assets jointly for couples, rather than in just the husband's name. If it is not possible to demolish a barrier, it may be possible to bypass it. For example, women in Somalia get around a traditional ban on their travelling by entrusting canisters of milk to male drivers, who transport them to town, where other women sell the milk (LPP et al. 2010).

**Activities** These are the range of tasks that women (and men) perform. Women can take on new tasks in the production, processing and trading of animals and livestock products. For example, in the Uganda Meat Export Development Programme (Case 5), a small but increasing number of women have started selling cattle. In Nyiro, in northern Kenya, women are planning to make and sell sweets made of camel milk (Box 57). Women may also share tasks, as when they take turns to collect and deliver milk to a collection centre (as in the *faraqa annani* milk cooperatives in Ethiopia, Case 11). They can also improve the quality and amount of their output by improving things like feeding, animal health and hygiene. Training (see *Agency* above) is an important way to improve their ability to do this.

**Governance** This refers to how the marketing chain is managed. It covers things like organizing marketing groups (and ensuring that women are part of them); requiring a certain number of the management positions to be occupied by women; creating links between the producers and potential buyers; building infrastructure such as livestock markets and dairies nearby within the reach of women; and providing financial services designed for women (Boxes 61 and 62).

### Recommendations and lessons

- **Understand the situation of pastoralist women**, the problems they face, and the changing roles they are playing. Consider the different needs of women and men producers, traders and processors.

**Box 57 Camel milk for women's food security and income in Nyiro, Kenya**

During a drought, Samburu men and boys go off with their cattle in search of distant pasture and water, leaving their camels behind with their families. The camels are a crucial source of milk for the women, children and old men who are not able to move with the main herd. One camel can produce up to 10 litres of milk a day.

But what if the family has no camels? They suffer a lot, and often end up dependent on relief handouts. Since 1999, Heifer Kenya has supported over 400 poor and vulnerable women pastoralists by training them in camel husbandry and giving them highly productive camels to look after. The women have started marketing committees to sell surplus milk on market days. Their families now have enough food, and are no longer dependent on relief. The women want to make sweets from the milk to earn more money.

More information: Reuben Koech

**Box 58 Women livestock traders in Harshin, Ethiopia**

Livestock trading is the major economic activity in eastern Ethiopia, an area dominated by pastoralists. Much of the trade is across the border with neighbouring Somalia and Somaliland, and it is risky, so is deemed unsuited for women. Oxfam organized a group of women from Harshin, near the Somaliland border, and trained them in developing and managing a business. The group was organized as a cooperative, licensed by the government, and received some seed money (part loan and part grant).

The women used the money to buy their first batch of animals, which they resold at a profit. As they earned more and grew in confidence, they started to fatten animals for up to 3 months. They have now grown into a significant livestock trading group and deal with various organizations that help pastoralist communities reduce their herd sizes during drought. They also export animals through both formal and informal channels.

**Box 59 Savings and credit for women in northern Kenya**

Few women in Dukana own livestock or other assets, and they find it hard to get loans. FARM Africa started a savings-and-credit scheme to help them, based on the Grameen Bank's well-known model from Bangladesh. It helped 23 women to form a pilot group. These were mostly single mothers or widows who already ran small businesses such as processing and selling hides, running butcheries and kiosks, and trading livestock.

The women made money, gained in confidence, and were able to expand their businesses. With greater assets, they could start to borrow from other lending institutions. The project managers saw how effective this approach was and expanded the scheme to other groups and districts.





- **Incorporate the concerns of pastoralist women** in the design of interventions, and ensure that women participate actively in different project phases and activities.
- **Build women's skills** (their "agency") through training in technical skills, improving their literacy and numeracy, and building their abilities in negotiation and business management.
- **Support women's access to productive resources** such as water, land, fuelwood, markets and knowledge. This means pressing for changes in formal and customary laws that restrict their activities, empowering them to take on a bigger role in the household and the community, making capital accessible to women, and sensitizing men to the potential of women contributing more to the household. (This is the "structure" dimension referred to above.)
- **Support women's ability to earn income** and their diversification into enterprises such as processing and selling livestock and animal products, and producing and selling forage, medicinal plants and wildlife products. (This is the "activities" dimension.)
- **Strengthen women's role in decision-making**, for example by organizing women-only groups, imposing quotas for women in mixed groups, and enabling them to capture the benefits of being involved in markets. (This is the "governance" dimension.)

*Building women's confidence and helping them get organized can improve their ability to interact with people from outside pastoralist society.*

# 7 Policies and development interventions

THE ECONOMY of dryland areas rests on a meagre resource base. Faced with poor soils, a dry climate and unreliable rainfall, people there have little option but to raise livestock. They produce only a few types of products – mainly live animals, meat and milk. They rely on services that both are thinly spread and lack depth: if a road becomes impassable or a processing plant fails, producers in an entire region can be left without a market.

Contrast this situation with more favoured areas. There, farmers can choose from dozens of different types of crops and livestock, a wide range of potential customers, and alternative sources of services. If one fails, there are plenty of substitutes.

All this makes policies and development interventions important in pastoralist areas – probably more important than in most other areas. Get them right, and they can have a big impact: the local people have a chance of prospering. Get the policies and interventions wrong, and people may be left even worse off than before.

We look first at the policies of governments and other organizations, before turning to a discussion of where best to intervene to promote the marketing of pastoralist products.

## POLICIES

### Problems with policies

Unfortunately, many policies that affect pastoralist areas hinder rather than help the production and marketing of livestock and animal products. Some problems:

**Bias against pastoralism** Historically, many governments have regarded pastoralism with suspicion. Policies have tried to persuade (or force) pastoralists to settle in one place, or restrict their access to land and water. Governments allocate large tracts of apparently unused land for irrigation schemes, nature reserves or foreign investment, even though this land may be an important traditional grazing area for herders. In disputes between pastoralists and farmers, governments often side with the crop growers.

**Uniform policies** Policies that are designed for large producers or high-potential areas are rarely suited to small-scale or mobile producers. In Kenya, for example, the Dairy Industry Act does not recognize small-scale milk producers (which includes most pastoralists). It does not distinguish between the wetter highlands (where most milk is produced) and the pastoral areas, which have low milk yields. It assumes that all milk is sold to milk-processing companies, even if there are no such companies in the production area. Someone who sells milk directly to a hotel or to a neighbour is guilty of an offence.

**Outdated policies** Some policies and laws are old: they have been overtaken by a changing world. In Kenya, many disease-control efforts are guided by an act of parliament adopted in 1905. The law requires all cattle to be dipped on a weekly basis to control ticks and other external parasites. But most of the communal dips that are supposed to be used are no longer functional.

**Lack of pastoralists' voice** Pastoralists are often on the margins of society, are poorly informed, and have little political power. They have little say in many of the policies that affect them. Despite considerable progress in some countries, too many policies are still imposed from the top down, without enough local consultation.

**Control rather than facilitate** Governments often seem to wish to control pastoralists' activities rather than facilitating them. For example, they may try to channel cross-border trade through certain border posts in order to prevent the spread of diseases and to levy tax. The Tanzania Livestock Marketing Project's border markets (Case 4) are an example of this approach. But pastoralists find such restrictions burdensome and expensive, so ignore or avoid them. Impose too many rules, and only large-scale producers, processors and traders can comply with all the tests and paperwork. Small-scale actors (including individual pastoralists and cooperatives) cannot compete.

**Poor implementation and lack of enforcement** On the other hand, good policies are good only if they are enforced. For instance, movement bans and quarantine requirements have to be enforced strictly if they are to prevent a disease from spreading. Partial enforcement is ineffective and encourages people to try to circumvent the rules. Staff entrusted with implementing policies and advising the people affected often have little experience or expertise in the subject concerned. Too many players may be given the task of implementing a policy without adequately


*Many politicians are interested in livestock issues only at election time.*





**Box 60 Emerging regional policies to support pastoralists**

**East Africa** The Intergovernmental Authority on Development finalized its regional policy framework on animal health in 2009. In the same year, a draft policy framework for food security in pastoralist areas was released by the Common Market for Eastern and Southern Africa (COMESA). This was issued as part of the African Union's Comprehensive Africa Agriculture Development Programme. A COMESA project aims to simplify trading across borders in order to boost food security.

**West Africa** Members of the Economic Community of West African States have passed a series of laws to protect pastoral land, enhance livestock mobility and ensure priority rights to use resources. Progress has been made in formulating legislation to enable pastoralists' mobility through an international transhumance certificate.

**Central Africa** Supportive policies range from government mobile schools for pastoralist children during their migration in Chad, to the allocation of land and veterinary services to pastoralist communities.

defined responsibilities, authority or coordination. In some cases, the agencies concerned are not aware of the policies they are supposed to implement.

**Conflict with customary rules** Many policies do not recognize that local people have their own customary rules that have governed them over many generations. These rules cover subjects such as access to pasture during the wet and the dry seasons, ways to deal with disease outbreaks, the marketing of livestock, and the disposal of dead animals. All pastoralist communities have their own traditional methods of controlling diseases and treating sick animals. Policies imposed from above rarely consider these traditional approaches.

**Lack of dissemination** Governments tend to put too little effort into public awareness. With little access to information, pastoralists too may not be aware of the policies that affect them. It is one thing to pass a law; it is quite another to keep the concerned people informed.

### Whose policies?

When we talk about policies, we normally think of the **national government**'s decisions, laws, rules and regulations. National governments are indeed the most important source of policy: they make decisions about everything from education to exports, and from transport to taxation. They may lavish resources on particular areas (and neglect other areas); they may subsidize, tax or ban certain activities; they build and maintain major roads, and provide services such as policing, security and extension advice. Government agencies set standards and grades for products, monitor compliance by actors in the marketing chain, and may even run major facilities such as abattoirs. What they do, what they do not do, and how they do it, can have a major impact on the fortunes of an area and the people who live there.

**National governments** are rarely monolithic: various ministries and agencies affect pastoralist areas: agriculture, livestock, trade and industry, infrastructure, interior, finance, etc. Their policies may not always align with one another. And national governments are not the only sources of policy. Here are some others.

**International agreements** Pastoralists frequently cross national borders, making collaboration among national governments important. Various regional organizations are developing policies on pastoralism – many of them aiming to make pastoralist's lives easier (Box 60).

**Importing countries** These may impose food-safety and traceability requirements, and may put a blanket ban on imports if, for example, there is a disease outbreak in an exporting country. Getting permission to import a particular product can be very difficult: Europeans cannot enjoy camel cheese made in Mauritania, for example, because the European Union does not recognize it as a product category (LPP et al. 2010).

**Local authorities** Local governments develop bylaws covering things like herd movements, land use and access to water in their districts. They may manage markets, maintain feeder roads, and try to resolve local disputes.

**Traditional authorities** These develop and enforce traditional laws, and exert pressure on local people to conform. In some countries they have the power to impose fines and other punishments on people who break these rules. They may also mediate disputes among individuals and groups.

**Private sector** Traders, processors and retailers set standards (or apply the standards agreed by national standards authorities), decide what products to buy (and from whom), and where to sell them. Banks and microfinance institutions decide on loan policies and the availability of credit. Business development services offer advice and inputs. In many marketing chains, a big actor such as a supermarket chain or an abattoir has a disproportionate amount of power, and can coordinate the whole chain (or impose its will upon it).

**Donors and development agencies** These may decide to invest in certain locations or types of activities, for example to make a marketing chain more efficient or to instigate a new one. Their activities may have a big impact locally (as evidenced by several of the cases in Chapter 8). Many development projects aim to pilot new approaches in the hope that governments will find them useful enough to replicate on a larger scale. Donors and development agencies tend to work through short-term projects, so their direct influence is temporary; they hope to have a more lasting effect by building sustainable institutions (such as a cooperative or a profitable marketing chain that perpetuates itself).

### Recommendations

The recommendations below are for policy directions for all of the institutions in the previous section, not just for national governments.

**Production** Policies should support pastoralists to produce high-quality products, and should encourage them to engage in the market economy. That includes the following:

- **Support pastoralism** Facilitate (rather than hinder) the pastoralist mode of production. That means finding ways to facilitate mobility, enable herders to gain access to pastureland and water, keep access to land open, and maintain and enhance locally adapted livestock breeds (see Chapters 2 and 4).
- **Mitigate the effects of drought** Drought is inevitable in the drylands, so it is vital to prepare for it so that as many people and animals can survive and recover quickly afterwards. Approaches include developing and managing emergency water points and pastures, facilitating movement to other areas, encouraging destocking before a drought, and helping build up herds afterwards (IIRR et al. 2004).





**Box 61 Taxation**

Livestock are one of the most repeatedly (and perhaps the most highly) taxed agricultural commodities in Africa. But livestock taxes and transit fees are rarely used to improve the physical structure or efficiency of livestock markets. The governing principle should be to levy user fees and taxes on livestock producers and traders for visible, tangible services and to maintain and upgrade production and marketing facilities.

Taxes in various countries may be too high, multiple, or even illegal. In southern Somalia, illegal levies of $3 per camel, $2 per cow and $1 per sheep or goat have been reported. Such levies reduce pastoralists' incomes and discourage them from selling their livestock. Lowering taxes and eliminating such illegal levies would encourage trade.

- **Control infectious diseases** Import bans can destroy a thriving trade overnight, so it is vital to avoid them. Measures include vaccination campaigns, quarantine requirements, and appropriate (but not excessive) restrictions on movements.
- **Promote animal health** Facilitate the provision of appropriate animal health services, for example by expanding the role of community animal health workers. Improve the control of the quality and safety of veterinary drugs.

**Services** Policies should aim to support services that facilitate marketing. In general, the aim should be to ensure that pastoralists have access to the same range of services that producers in other areas enjoy (Chapter 5). Suggestions include:

- **Improve transport** Improve trunk and feeder roads that link production areas with markets. Establish and maintain corridors where pastoralists can herd their animals between their traditional grazing areas and the market. Ensure that these corridors offer adequate access to feed and water.
- **Invest in other infrastructure** This includes basic facilities such as electricity and telecommunications, as well as market-related facilities such as marketplaces, milk-collection points, dairies and abattoirs. Simple but robust facilities (such as slaughter slabs) may be more appropriate than the latest technology (such as automatic equipment).
- **Ensure access to market information** Ensure that accurate, up-to-date market information is made available. That means collecting information on live animals and milk; disseminating information via the mass media, market billboards, the internet and mobile phones; and expanding the areas served by mobile phone signals.
- **Bring facilities to pastoralists** Make services such as schools, markets, processing facilities and credit provision more accessible to pastoralists. This may mean building new local markets and other facilities, improving how existing facilities are managed, or making them mobile (such as mobile schools and banks, or money-transfer services that use mobile phones). It also means designing them so pastoralists can use them easily: having schools in pastoralist areas teach subjects related to pastoralism, and designing loans with the pastoralist production cycle in mind.

**Encourage trade and investment** This means removing unnecessary restrictions, reducing taxes, and facilitating cross-border trade. Taxes collected from the pastoral production and marketing should be reinvested in pastoralist areas (Box 61).

**Ensure fair competition** Avoid distortions that exclude certain actors from the market, and eliminate cartels and government monopolies.

**Improve quality and image** Find ways to promote the quality and image of pastoralist products. Explore niche markets for promising products such as local specialties such as biltong (Box 7 in Chapter 3) and camel milk (Box 8).

**Coordinate services** Coordinate the provision of services to ensure that they support one another. Livestock marketplaces, for example, require roads, transport, health services and credit facilities if they are to function well.

**Skills and organization** Policies should try to build the human and social capital of pastoralists so they are better able to take advantage of opportunities to market their products (Chapter 6).

- **Build skills** This includes training pastoralists, processors, traders and service providers in appropriate skills, and using other capacity-building approaches. For pastoralists, this includes how to produce for the market, finance, communication, business, marketing and organizational leadership. For traders, it includes group governance, management of animals, marketing, negotiation and finance. For processors, it covers processing techniques and business management.
- **Organize groups** Groups are key to marketing both animals and milk. Various types of groups may be appropriate for different situations: producer cooperatives, organizations to link producers with traders, forums that bring together producers and traders with government and service providers, and commodity associations that cover all stakeholders in a particular marketing chain.
- **Organize second-order associations** Encourage the formation of unions of cooperatives to represent the interests of pastoralists in negotiations with traders, processors and service providers, and to lobby local and national governments.
- **Support women** All pastoralists face difficult challenges, but women are at an additional disadvantage. Efforts are needed to build women's skills in production and marketing, create more opportunities for them, involve them in a wider range of activities, and strengthen their role in making decisions.

**Policy formulation** The process of formulating policies must take pastoralists' views more into account. Some suggestions:

- **Listen** Ensure that pastoralists are involved in developing and implementing policies. Encourage them to get organized so they can influence policy decisions.
- **Review** Revise policies and laws to bring them up to date, taking into account pastoralists' opinions.
- **Build on traditional laws** Understand traditional laws and institutions, and build on those that affect production and marketing of livestock and livestock products. Help communities develop bylaws based on traditional rules.
- **Improve data collection and analysis** The data on pastoralist production and marketing are poor and out of date. Bad data are unlikely to lead to good policies. To convince policymakers, it is necessary to have convincing data that show the effects of current policies, and the likely gains to be made by changing them.





## WHERE TO INTERVENE?

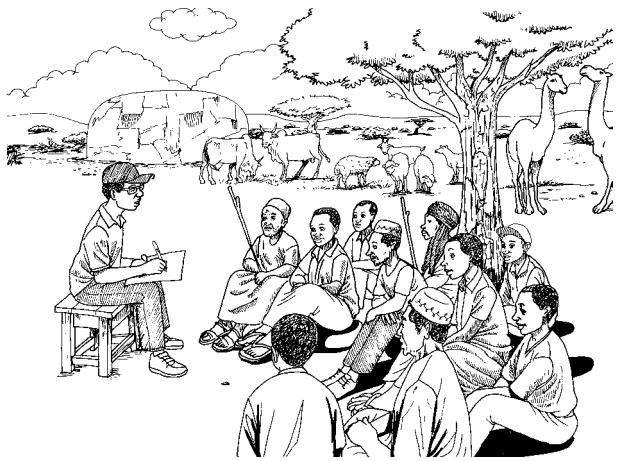
### Identifying intervention points

It is possible to intervene at different points in the marketing chain to support and develop pastoralist marketing. Where should governments, donors and development agencies intervene?

The best place to intervene is not always obvious. Production systems and marketing chains can be complex, and the needs and opportunities are many. Each stakeholder will tend to see the problems that affect him or her, and may disregard other issues. Researchers in different scientific disciplines also have their own biases. It is necessary to analyse the situation from different angles, and to gather opinions from different sources, before identifying the bottlenecks where interventions can be most cost-effective. Here are three ways of doing this:

- **Marketing chain analysis** This involves following a product from the producer to the consumer, and identifying the chain actors who buy, sell, process and handle it at each stage. It also means identifying the individuals and organizations that support the chain through services (such as inputs, information or finance), and understanding the relationships among them. It identifies bottlenecks in the chain and ways these can be overcome.
- **Participatory needs assessment** This means assessing needs not as an academic exercise to be done by outside professionals, but by involving the stakeholders themselves in identifying their own needs. This is particularly important in pastoralist chains because of the lack of reliable data and because of the power differences between stakeholders. Methods include participatory appraisal, focus group discussions, institutional mapping and interviewing key informants.
- **Innovation platforms** (Chapter 6) can be a good way of identifying potential intervention points. They bring together different stakeholders in the chain to discuss problems, identify potential solutions, and coordinate the intervention. Box 62 gives an example of how this was done for goat marketing in Zimbabwe.

We can identify four possible intervention points: directly with pastoralists, further along the chain (for example, with traders or processors), with service providers, and with government (Figure 13). We discuss each in turn below.



*Participatory needs assessment is a first step in designing an intervention.*

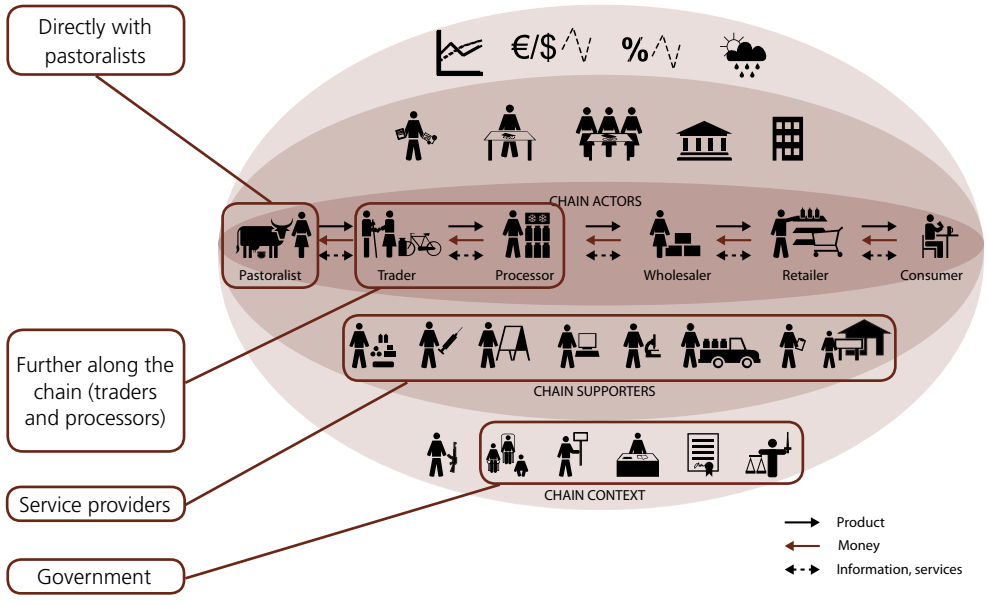



*Figure 13 Possible intervention points in the livestock chain*

### Directly with pastoralists

This involves working directly with pastoralists and their organizations to help them improve their production and marketing. Examples include training dairy producers on feeding and milk hygiene, training herders on animal health and how to make feed supplements, and organizing pastoralists into cooperatives. Eight of the 15 cases in Chapter 8 used such approaches (Table 3).

Especially for non-government organizations, this is an attractive approach because it means working directly with the poor. Pastoralists are usually the most disadvantaged actors in the marketing chain, so helping them directly should empower them to deal more effectively with other members of the chain. It is possible to build the marketing chain upwards if one starts from the lower segment of the chain.

At least that is according to theory. But this approach has a major limitation: the difficulty and cost of trying to reach large numbers of mobile, scattered, poorly educated people in a deprived area. We have already discussed two ways of getting around this problem: organizing groups of pastoralists, and working through intermediaries such as local community organizations (Chapter 6). In addition, sustainability may be a problem: the types of changes in behaviour and attitudes required may take years of work to make permanent. For these reasons, working directly with pastoralists was the main focus in only one of the 15 cases (the Uganda Meat Export Development Programme, Case 5).





**Table 3 Points of intervention used by the 15 cases in Chapter 8**

| Case | Country | Product | Pastoralists | Processors | Traders | Services | Government |
|---|---|---|---|---|---|---|---|
| 1 | Ethiopia | Live animals | | | xx | | |
| 2 | Kenya | Live animals | | | | xx | |
| 3 | Kenya | Live animals | x | | x | xx | |
| 4 | Tanzania | Live animals, meat | | x | | xx | x |
| 5 | Uganda | Live animals, meat | xx | x | | x | x |
| 6 | Mali | Live animals | x | | | xx | |
| 7 | Benin | Live animals | | | | xx | |
| 8 | Kenya | Meat | x | xx | | | |
| 9 | Botswana | Meat | | xx | | | |
| 10 | Tanzania | Leather products | | xx | | | |
| 11 | Ethiopia | Milk | x | xx | | | |
| 12* | Ethiopia | Milk | | | | | |
| 13 | Uganda | Milk | x | xx | | x | |
| 14 | Burkina Faso | Milk | x | xx | | | |
| 15 | Niger | Milk | x | xx | | x | |

xx = major point of intervention; x = secondary point of intervention

* No intervention

**Box 62 Markets as a solution to goat mortality in Zimbabwe**

The biggest problem in keeping goats in Zimbabwe? High mortality rates. Over a quarter of smallholders' goats die before they can be sold or slaughtered. That is a huge loss for the goat raisers.

So the solution is to improve feeding and veterinary care, right? Wrong. Researchers at the International Crops Research Institute for the Semi-Arid Tropics set up an innovation platform (a forum of stakeholders in goat production and marketing) to discuss the problems. The members realized that raising goats was not profitable, so the farmers lacked an incentive to improve production.

The major bottleneck was the lack of formal markets where they could sell their animals: most were sold at the farm gate. So the project built sales pens for small stock at marketplaces, and introduced monthly auctions. That made it possible for goat raisers to sell their animals more easily: some 85% of animals are now sold through the auctions. The innovation platform also persuaded the local abattoir to reduce the fees it charges for slaughtering goats. As a result, the price of goats has roughly doubled since 2008. Goat raisers invest much of the income in goat production, especially in buying feed. Mortality has dropped as a result.

More information: ICRISAT (2011), van Rooyen and Homann-Kee Tui (2009)

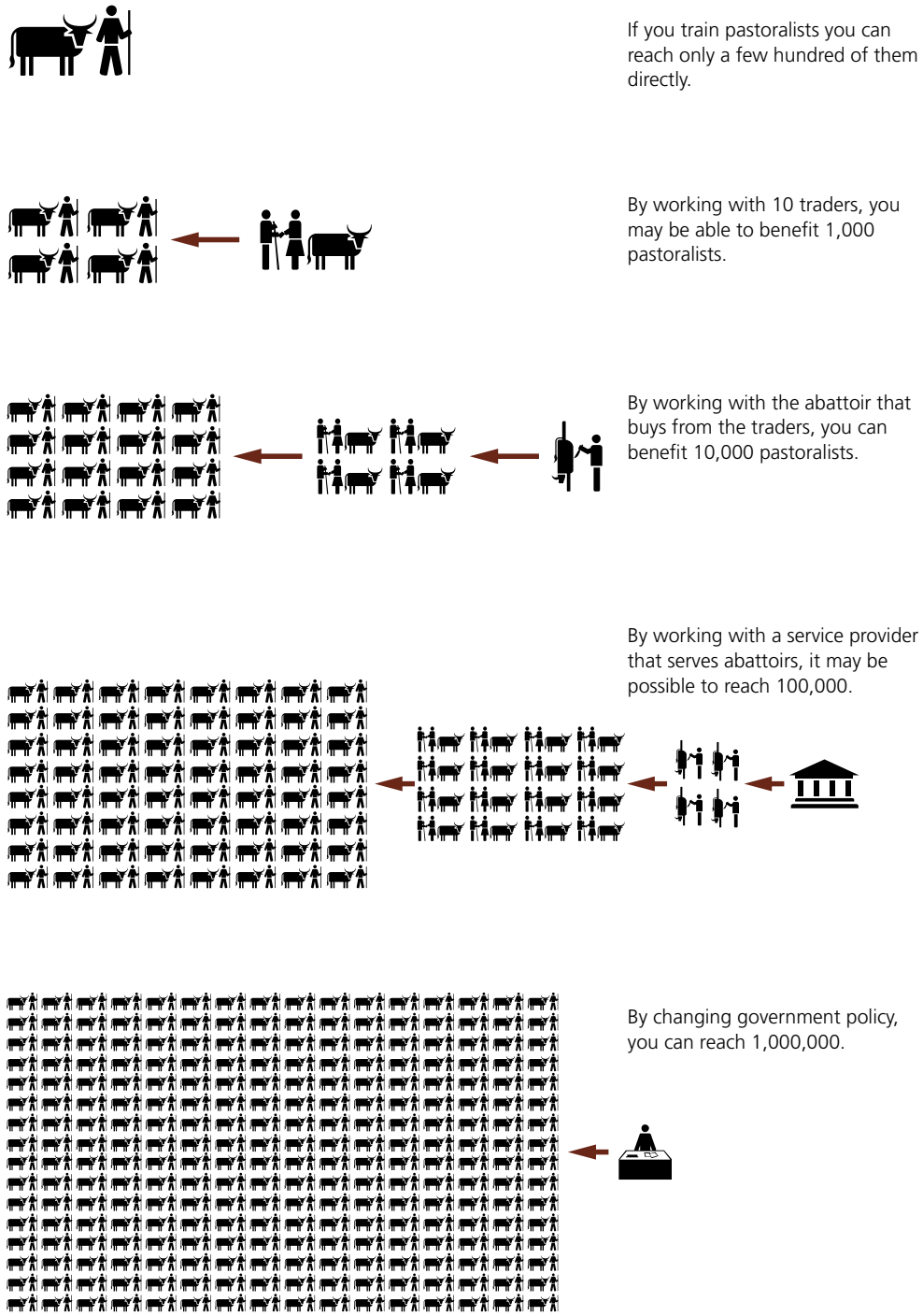



*Figure 14 By choosing the intervention point carefully, it may be possible to benefit more people*





### Traders and processors

Faced with these difficulties, it is often better to work with actors further along the marketing chain, such as traders and processors. This approach has four potential advantages:

- It is easier and cheaper to work with a few traders, or with a processing plant, than to try to reach lots of scattered producers.
- The approach can create or rehabilitate facilities such as abattoirs, dairies and marketplaces that are vital for marketing.
- It has the potential to influence a large number of producers indirectly. A cattle trader, for example, will pay more for good-quality animals, giving the pastoralists an incentive for supplying them. The trader may even train the pastoralists on health and feeding in order to guarantee a reliable supply (Figure 14).
- It has the promise of greater sustainability because more people, in more roles, have an incentive to maintain and further develop the system.

We can see this approach most clearly in Case 1, where the Revitalizing Agricultural/Pastoral Incomes and New Markets project provided loans to traders in Ethiopia so they could buy animals from pastoralists during a drought. The project also linked the traders to feed suppliers and abattoirs.

Other cases used similar approaches. It is in the interests of dairies to organize their suppliers to bring their milk to a collection point for bulking. That makes it easier to check quality and reduces the cost of picking up the milk. Similarly, the abattoirs organize and train livestock keepers to ensure deliveries of well-fed, healthy animals. Box 63 gives another example, in which shearing sheds run by traders were used to reach large numbers of shepherds.

Eleven of the 15 cases used such approaches: nine worked with processors, and two with traders (Table 3). For most of them, this was their main point of intervention, though seven of the ten also worked directly with pastoralists.

While this approach seems attractive, it suffers from two potential drawbacks: it can be difficult to monitor impact, and the intervention may benefit the traders or processors rather than the people intended – the pastoralists. For example, a dairy that gets its suppliers to bring their milk

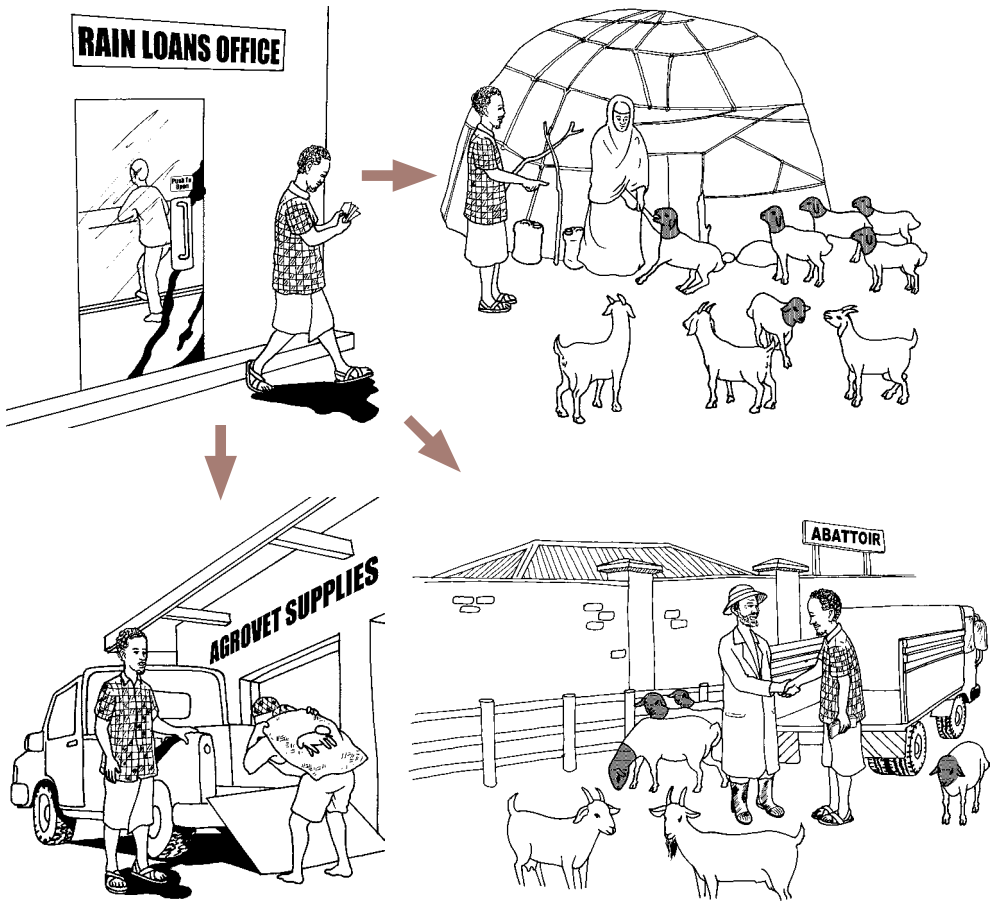
**Box 63 Mentoring wool traders in Lesotho**

Private wool traders in Lesotho run shearing sheds where pastoralist shepherds bring their sheep and goats to be shorn. But the quality of the wool and cashmere used to be low because the animals were unhealthy and poorly fed. The sheds were sometimes poorly run, the wool was incorrectly graded, and pricing was not transparent.

Mngcunube Development Pty Ltd, a consulting firm, worked with the traders to improve their operations. Mentors from the firm helped the traders improve their operations, maintain records, and improve grading. They helped the traders determine fair prices, and ensured that these were clearly displayed so the shepherds would know how much money they could expect. Payments were made promptly, within 2 weeks after shearing. The mentors also trained local people as animal-health workers, and helped them set up their own businesses.

As a result, the number of pastoralists bringing their animals in for shearing increased: in the 2006/7 shearing season, nearly 3,000 shepherds brought in 59,000 sheep for shearing. Prices paid to shepherds for wool rose by 14% in a single year. The health of the animals improved dramatically, with mortality rates falling from 25% to less than 5%.

More information: KIT and IIRR (2008) pp. 146–58




*Loans from the RAIN project (Case 1) made it possible for traders to buy animals during a drought, purchase feed, and sell them to abattoirs. That kept the marketing system running and benefited everyone.*

to a collection point is imposing the cost of bulking on the suppliers, but may not offer a higher price for the bulked product. Similarly, a trader may decide to pocket any profit rather than passing it on to the producers. An example of this is where large-scale traders have established their own feedlots and holding grounds so they can add value themselves. Rather than paying a good price for slaughter-ready animals, they buy animals that they can fatten up and sell at higher prices. A higher volume of trade does not always mean that pastoralists benefit.

In theory, competition should reduce any tendency for individual traders or processors to make excessive profits: other traders or processors will see the potential and also enter the market. The producers will then have a choice of whom to sell to.

In practice, however, this often does not work. Markets in pastoralist areas are often very "thin": there is room for only one, or a few, traders, who may easily collude with each other to keep the prices they pay to producers low. There may be only one abattoir or dairy in the area,





so it has an effective monopoly over purchases of livestock or milk, and can dictate terms to the other actors in the chain.

The dominant actor depends on the chain. In some marketing chains, for example, big supermarket companies play a dominant role: they can dictate terms to their suppliers, who in turn try to squeeze the best value for money out of their suppliers. In many of our cases, it is the processor which is the dominant player – at least in the parts of the chains that the cases report on.

Producers are in a weak position: they have few alternative customers, and must accept the prices and terms on offer. In our cases, the development agencies tried to strengthen their hand in three ways:

- By helping them get organized, so strengthening their ability to negotiate.
- By helping them seek new markets, so bypassing the current dominant actor.
- By ensuring that the processing facility was owned either by the pastoralists themselves (through a cooperative) or by a trusted third party (a community organization or the government).

### Service providers

Another option is to work with service providers to improve the functioning of the chain. This was the main approach used by five of our 15 cases (Table 3), all concerned with building marketplaces or improving how they were managed. For another three cases, it was a secondary point of intervention. Additional services covered the provision of feed, animal health and transport, and establishing training institutions. Chapter 5 and Box 63 also illustrate the provision of services.

The logic of intervening with service providers is similar to that for traders and processors. Doing so is easier than serving large numbers of producers; it can alleviate bottlenecks that restrict production or marketing; it is possible to benefit a large number of poor people indirectly.

A possible problem with using service provision as the intervention point is the ability to target the desired group of beneficiaries. Improving a market, for example, may benefit traders more than producers. There is a danger that by increasing the efficiency of trading and the number of animals for sale, the price per animal may actually go down rather than up. On the other hand, a thriving market may have many benefits: in Bassila, in Benin, the reorganized livestock market has attracted people to sell and buy many other products, boosting the overall economy of the area (Case 7).

### National government

By targeting or working through government, it may be possible to improve the marketing of pastoralist products throughout the entire country. Chapter 8 includes two large-scale government efforts: the Tanzania Livestock Marketing Project (Case 4) and the Uganda Meat Export Development Programme (Case 5). But the primary focus of these was on developing local services (transport and marketplaces in Tanzania) and on organizing pastoralists (in Uganda). We have no examples of governments changing (say) taxation policies or laws governing livestock movements, which would have a systematic effect on marketing. We also have no examples of lobbying and advocacy by pastoralists or development organizations to push for policy changes.

### Other intervention points

**Local government** Several of the cases in Chapter 8 discuss working with local authorities to promote marketing in their districts. Local governments have played a very constructive role in providing land (for example, for the Lomidat abattoir in Kenya, Case 8), supporting changes in the management of markets in Kenya (Case 2), and improving the management of markets in Mali (Case 6) and Benin (Case 7). But in none of the cases were they the major focus of the intervention.

**Private companies** These are conspicuous by their absence in our cases. There is only one joint venture represented (the abattoir constructed by the Uganda Meat Export Development Programme, Case 5). Several other cases depict cooperative-owned companies, but they are not the same as private firms. Perhaps this absence is a result of the particular cases chosen for this book, or a general tendency for development projects to avoid working with the private sector. Or perhaps it reflects the general lack of attractiveness of the drylands for private investment.

**Retailers** None of our 15 cases focused on retailers as a point of intervention. Possible approaches would be to persuade supermarkets to stock pastoralist products such as camel milk (Box 8), or to work with butchers and milk retailers to improve the quality of the products they sell.

**Consumers** Similarly, none of our cases focused on consumers. It would be possible, for example, to run a marketing campaign to increase the demand for pastoralist products, or to try to influence public opinion to get a change in the policies of the government or big retailers. Such efforts would have a potentially big effect on pastoralist marketing as their effects cascaded back through the chain to the producers.

### Multiple intervention points

In only three of our cases was the intervention focused exclusively at a single point in the marketing chain (Table 3). In 11 of the other cases, it focused on two or more points. It seems that simple solutions with a single point of intervention are relatively rare. Rather, the situation usually requires initiatives to tackle several issues at once in order to overcome a problem in marketing.

### Lessons and recommendations

Here are some guidelines for selecting where to intervene to improve the marketing of pastoralist products:

- **Address the key bottlenecks** A chain is only as strong as its weakest link. Strengthening this link will make the whole chain stronger and more efficient. Conversely, there is little point in trying to solve a particular problem if there is a narrower bottleneck somewhere else in the chain. Often, it will be necessary to address several problems at the same time to overcome a particular bottleneck. Partnerships with other organizations can help address complex issues.
- **Intervene where it is most beneficial** Select the intervention points that have the potential to benefit the most people, or the neediest people. This may mean working with traders, processors or service providers, rather than (or as well as) with pastoralists.
- **Cut your coat according to your cloth** It is not possible for a single project to solve all the problems in an area. Projects should be realistic, and tackle only those problems that they have a chance of resolving.

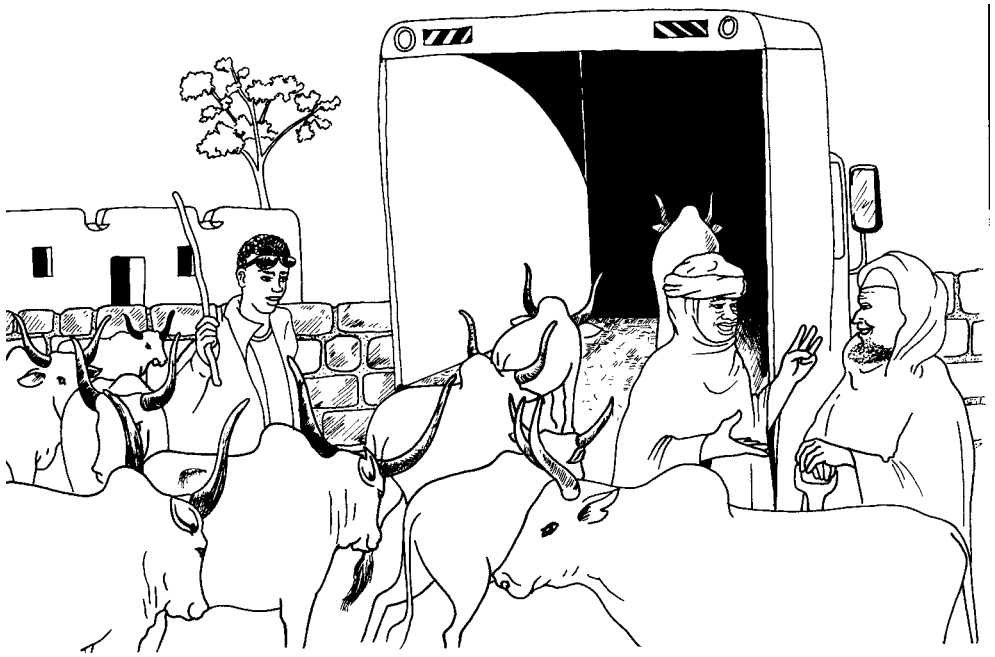




- **Take power differences into account** When deciding where to intervene, it is important to understand the power relationships among the various actors. Design interventions to strengthen the weaker actors in the chain.
- **Seek win–win situations** Interventions are more likely to be successful and sustainable if everyone involved benefits, because then everyone has an incentive to adopt the new way of doing things. Try to avoid situations where there are clear winners and losers.
- **Seek collaboration, not confrontation** Related to this, try to have the various stakeholders work together in partnership. That means creating linkages, mitigating conflict, building trust, and helping people recognize the long-term benefits of collaboration.
- **Strive for interventions to be self-sustaining** Interventions in marketing have the potential to be self-sustaining because people earn money that they can reinvest in the chain. Avoid interventions that will rely on continued support from a development organization or the government.
- **Design for success** This means learning from others' experience, and avoiding approaches that have failed in the past. It also means monitoring activities and impacts, and adjusting the intervention as required. Pastoralist areas are unpredictable places: try to anticipate potential problems such as drought, conflict, migration and price fluctuations. Be prepared to adjust the approach if necessary.

# 8 Cases

## *Live animals*



# Case 1 Maintaining markets during drought: The Revitalizing Agricultural/Pastoral Incomes and New Markets project in Ethiopia

**Emma Proud**

| | |
|---|---|
| **Title** | Revitalizing Agricultural/Pastoral Incomes and New Markets (RAIN) |
| **Location** | Somali Region, Ethiopia |
| **Commodity** | Live sheep and goats |
| **Duration** | 2011: 4-month intervention as part of 3-year programme |
| **Objectives** | Work with livestock traders to buy animals from vulnerable households<br>Build the market for fodder in pastoralist areas<br>Stimulate the formal livestock trade for pastoralists |
| **Beneficiaries** | Vulnerable, drought-afflicted pastoralists |
| **Implementer** | Mercy Corps |
| **Key actors** | Livestock traders<br>USAID/OFDA (donor) |
| **Cost** | $250,000 |
| **More information** | Emma Proud, eproud@hq.mercycorps.org, www.mercycorps.org |

The Somali region of Ethiopia is hot, dry and has erratic rainfall. In May 2011, the rains did not come as expected at the end of the long dry season. That reduced the amount of pasture and almost dried up the *birkads* – cement-lined ponds – which are Somali pastoralists' only source of water in the dry season. These pastoralists had to trek further than usual in search of water and pasture for their camels, sheep and goats. Hunger, thirst and constant movement weakened the livestock and made them ill.

There are few markets in this remote region, so by the time the animals reach the market they are so weak that they fetch a very low price. Some die on their way. So taking animals to market is a big risk for pastoralists. Fewer animals sold means less market activity. Sales can take a long time to recover after a drought.

Traders who buy animals often lack the capital to purchase large numbers. The pastoralists can sell only as many as the traders buy. The traders on their part, lack feed to give to the animals to fatten them before sale.

## Stimulating trade

Instead of assisting the pastoralists directly, RAIN decided to support the traders who buy animals from them. If the traders could continue to buy animals at a fair price throughout the drought season, then the pastoralists would benefit.





RAIN offered interest-free loans of $15,000 each to 17 traders for four months. These loans were issued by Mercy Corps, as at the time no banks were offering sharia-compliant loans. The traders could use this money to travel around the area and buy animals.

RAIN linked the traders to feed suppliers who sold feed to the traders so the animals could be fattened before sale. Mercy Corps paid 25% of the initial sales price to encourage this investment.

The traders used to sell their animals informally to Somaliland. RAIN linked them with abattoirs in highland Ethiopia, where there is a lot of demand for meat for export.

## A stronger market

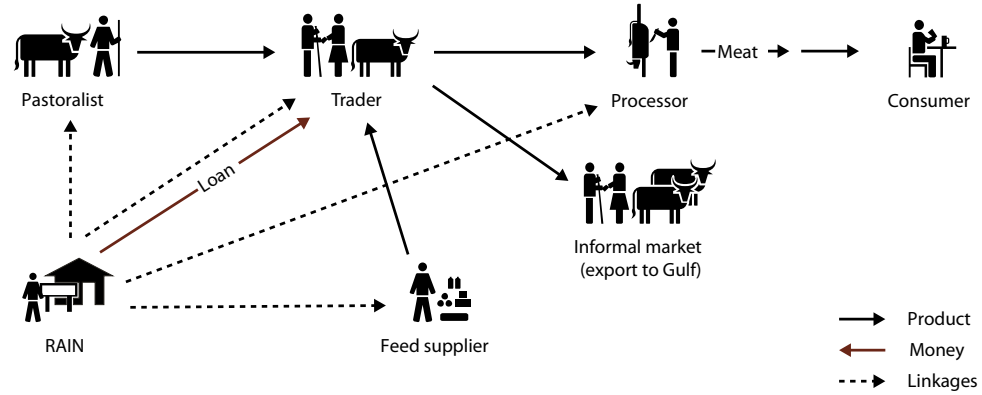
As a result of the project, some 4,500 households from 23 drought-affected woredas (districts) sold 10,600 livestock at fair prices. By the end of the drought, households in the project sold an average of 15 more sheep or goats than those not supported by the project.

The livestock market continued throughout the drought. That benefitted the pastoralists immediately and into the future. New market channels for animals were established – 2,400 sheep and goats were sold to the highland abattoirs.

The market for feed was strengthened: a total of 120 tons of feed were sold.

Overall, the project resulted in benefits of $472,000, after loan repayment. Of this, 86% went to pastoralists, 8% to traders (including their expenses for transport, feeding, watering and veterinary care), and 6% to government (mainly from currency fees).

## Marketing chain



# Case 2 Co-management of livestock markets in Kenya

**Abdikadir Mohamed**

| | |
|---|---|
| **Title** | Co-management of livestock markets |
| **Location** | Kenya |
| **Commodity** | Livestock |
| **Duration** | Began in 2005 |
| **Objectives** | Develop partnerships between communities and local authorities to manage livestock markets better |
| **Beneficiaries** | 130,000 producers, 2,000 livestock traders, 11 local authorities in Samburu, Isiolo, Moyale, Marsabit, West Pokot, Garissa, Turkana and Baringo |
| **Implementer** | Kenya Livestock Marketing Council<br>SNV, FAO, Samburu Integrated Development Project |
| **Key actors** | Pastoralist, livestock traders, livestock marketing association, local authority and district livestock marketing council |
| **Cost** | $125,000 |
| **More information** | Abdikadir Mohamed, abdikadir@livestockcouncil.org |

LIVESTOCK MARKETS in pastoral regions in Kenya do not function well. Facilities are often dilapidated or lacking entirely: holding pens are run down, and there are no loading ramps, feed stores or toilets. Markets are insecure, and theft of stock is common. A lack of control means that fees are not collected and funds go missing. A few traders control trade. All these things discourage traders and buyers from using the facilities.

Why are livestock markets so often poorly managed? They are the responsibility of the local authorities, which have many other duties and lack the skills and resources to do a good job. If they have suitable policies, these are often not implemented. This is even a problem where a development project has built a market and handed it over to the local authority. After the project finishes, the local authority cannot maintain it.

## Introducing the co-management idea

The Kenya Livestock Marketing Council (KLMC) approached the local authorities in 26 markets in eight counties to explore ways of improving market management. It introduced the idea of co-management, where a partnership of local authorities and communities jointly manage the market. This is not easy, as it means the local authority has to share responsibilities for running the market and control over the funds it generates.

Introducing this new approach consisted of three steps. First, KLMC introduced the idea of co-management to the local authority, starting with the top executives, and then guiding the approach through the council's lengthy decision-making process and suggesting changes to local regulations and bylaws.





Second, KLMC helped the people who used the market to form a livestock marketing association to represent their interests. The marketing association included respected representatives of producers, traders and people living nearby.

Third, KLMC brought the local authority and the marketing association together to agree on how best to manage the market. KLMC trained them on the skills they would need. The whole process of needs assessment and training involved the participants.

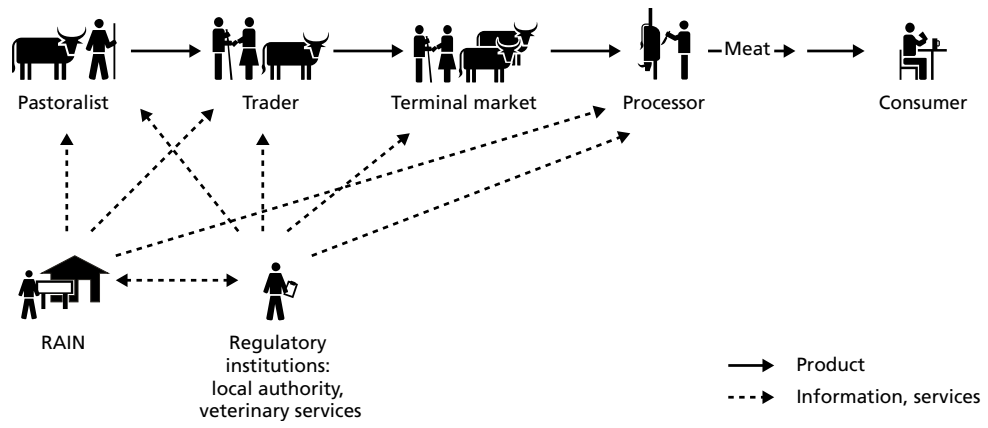
Once agreement was reached, the association took responsibility for managing the market. It can decide on things like the facilities that need improvement, security, coordination, promotion, information, fee collection, disease control and surveillance.

## Dozens of partnerships

Partnerships have been established in 26 markets in Samburu, Isiolo, Marsabit, Moyale, West Pokot, Baringo, Turkana and Garissa. The number of animals traded has risen by 30%, as local producers discovered they no longer have to sell their animals elsewhere to get a good price. Animals now fetch better prices as good facilities and services attract both buyers and sellers. In Chepararia market in West Pokot, for example, the price of a goat or sheep had gone up in the 6 months after start of the co-management project.

More trade and higher prices mean that the association can collect higher fees. Security has been improved, and revenues are up by 50% at areas in Isiolo, Baringo, and West Pokot, among others. The local authority gives between one-fifth and one-half of the revenue to the association to cover management expenses. Corruption has declined as the association keeps a close eye on the finances. Nevertheless, both the local authority and the marketing association need continuous training to deal with new challenges as they arise. With more income, pastoralists now have money to maintain and repair the markets themselves.

## Marketing chain



# Case 3 Maasai Animal Health and Livestock Marketing Project: Ramat Livestock Enterprises, Kenya

**Reuben Koech**

| | |
|---|---|
| **Title** | Maasai Animal Health and Livestock Marketing Project |
| **Location** | Kenya (Loita and Keekonyokie divisions, Narok County) |
| **Commodity** | Cattle, sheep and goats |
| **Duration** | 2005–12 |
| **Objectives** | Improve pastoralists' livelihoods by reducing livestock mortality, streamlining trade in live animals, and providing a sustainable market for livestock |
| **Beneficiaries** | 60,000 people (12,000 families) |
| **Implementers** | Heifer International-Kenya<br>Loita Development Foundation<br>Keekonyokie Suswa Trust |
| **Key actors** | Loita Development Foundation and Keekonyokie Suswa Trust<br>Ministry of Livestock Development<br>Ramat Livestock Enterprises Ltd.<br>Heifer Nederlands and Heifer International USA (donors) |
| **Cost** | $2.25 million |
| **More information** | Reuben Koech, reuben.koech@heifer.org, www.heifer.org |

The Loita and Keekonyokie Maasai are among the poorest people in Kenya: more than half live on less than a dollar a day. The two groups live in southwestern Kenya close to the border with Tanzania. They own 70,000 cattle, 200,000 sheep and 240,000 goats. Preventable diseases are a big problem: they kill 30% of the animals. Marketing their animals is also difficult: trekking them to Nairobi to sell can be a risky business as the city is 200 km away, and the animals get weak and may die en route. Local traders buy the animals based only on how the animals look ,instead of by weight. The pastoralists have little choice but to accept the low prices that traders offer, but they have few incentives to sell more.

Deforestation and soil erosion in the Maasai home area mean that water and pasture are scarce, especially during drought. And the traditional culture makes it hard for women and young people to get jobs, do business and earn money.

## Ramat Livestock Enterprises

Heifer Kenya has been helping the Loita Development Foundation and the Keekonyokie Suswa Trust to tackle these problems. They have set up agro-veterinary shops and vaccine centres in the area so they can buy medicines and other inputs and get their animals vaccinated.

In 2007, Heifer and the two local organizations formed Ramat Livestock Enterprises Ltd. to market livestock. This company set up a market at Suswa, 80 km west of Nairobi, along with a





feedlot, water reservoirs, weighing facilities, and a 140-ha pasture sown with improved forage. The holding ground can handle 800 cattle and 1,500 sheep and goats. IFAD financed a biogas facility to turn manure into electricity. Heifer trained the Ramat board and management to run the market, which serves abattoirs in Nairobi as well as exporters who supply to the Middle East.

The project has trained young Maasai men and women as entrepreneurs. The Ramat market sources animals from them; the animals they bring to the market are often thin, so are fattened in the feedlot for some time before they are sold. Healthy, well-fed animals fetch a better price, and traders now purchase by weight. The pastoralists now regard livestock as a business, and their incomes have increased. During drought, pastoralists can bring their animals for grazing at the Ramat holding ground. They pay Ramat a fee for this service.

## Healthy livestock, healthy business, healthy environment

Ramat has become a training centre for pastoralists to learn how to manage their livestock better. The Loita Development Foundation and Keekonyokie Suswa Trust work with their communities and introduce new management practices. People have learned about tree-planting, controlling runoff, collecting water, controlled grazing, and issues such as gender and HIV/AIDs. Together with other partners, Heifer Kenya has supported the training of young men and women on animal health and business skills. The pastoralists have become more conscious in caring for the environment.

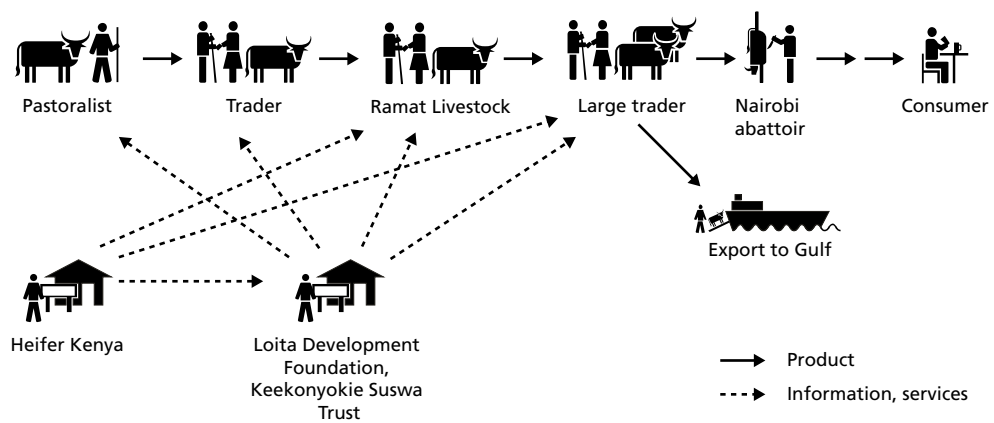
Vitamins, minerals and medicines are now available, and regular vaccination has improved the animals' health. As a result, livestock mortality has been cut in half.

Young people can now get loans from the government's Youth Enterprise Development Fund through Ramat. With the businesses created by the project, more people now have jobs.

Local organizations consult the people and pastoralists are now more involved, giving them a sense of belonging and pride. Women pastoralists have revived their groups and formed new ones. They are more active now in livestock trade.

Pastoralists and other agencies have copied the project's approach, and the government is planning to replicate it in other arid and semi-arid pastoralist areas.

## Marketing chain



# Case 4 Tanzania Livestock Marketing Project

**Jeremiah Temu**

| | |
|---|---|
| **Title** | Tanzania Livestock Marketing Project |
| **Location** | Tanzania |
| **Commodity** | Cattle, sheep and goats: meat and meat products |
| **Duration** | 1997–2005 |
| **Objective** | Revitalize livestock marketing and increase quality meat production for local and export markets, reduce weight loss and mortality rate. |
| **Beneficiaries** | 4.95 million livestock farmers, 10,000 traders and agents, 4,000 butchery operators |
| **Implementer** | Ministry of Livestock Development (now known as Ministry of Livestock and Fisheries Development) through Tanzania Livestock Marketing Project management team |
| **Cost** | $16.39 million |
| **More information** | Jeremiah Temu, jeremiahtemu@yahoo.com |

In the 1980s, the livestock industry in Tanzania was facing serious problems. The marketing infrastructure and veterinary services were poor. Tanganyika Packers, a big processor, had lost its sanitary certificate, so there was a sharp decline in exports, and domestic demand for the expensive cuts fell as consumers became concerned about quality. Livestock transport was erratic because only one-quarter of the railway cattle wagons were functional, so the livestock owners had to trek their animals to market. The cattle lost weight and became ill or even died on the way; if they made it to the abattoir, their meat was tough. Herds of cattle trampled the ground on their way to market, causing disputes with landowners along the way. The country's slaughter facilities were low-standard, and there were few facilities to chill the meat. Butchers were obliged to sell all the meat on the day of slaughter.

## Building infrastructure

The Tanzania Livestock Marketing Project aimed to revitalize livestock marketing by building and rehabilitating the necessary infrastructure. It focused on 15 regions of mainland Tanzania north of the central railway line, where more than 75% of livestock population is found. The majority of the livestock holders in this area are agropastoralists and pastoralists from the Sukuma, Gogo, Maasai and Taturu tribes.

The project restored and constructed 90 night camps, 56 markets, 15 checkpoints, 13 holding grounds, 9 railway sidings and 60 cattle wagons. It also built an abattoir with a capacity of 200 cattle and 200 sheep or goats. Other initiatives included establishing the Meat Industry Training Centre at Dodoma to improve skills of meat-industry workers, and a web-based livestock marketing information system, www.lmistz.net, set up jointly with Texas A&M University.





Improvements in rail and road transport have cut the mortality rate from 5% to 0.2%. With a modern abattoir providing quality slaughter services, exports of meat have resumed, and shipments of cattle, sheep and goat meat to the Middle East have picked up. Exports rose from zero in 1997/98 to 840 tons in 2011/12. Domestic marketing has also improved as a result of better facilities, lower costs and fewer delays. Access to common markets has increased competition among traders, and prices of livestock have improved. Both producers and traders are willing to pay higher fees for the improved services.

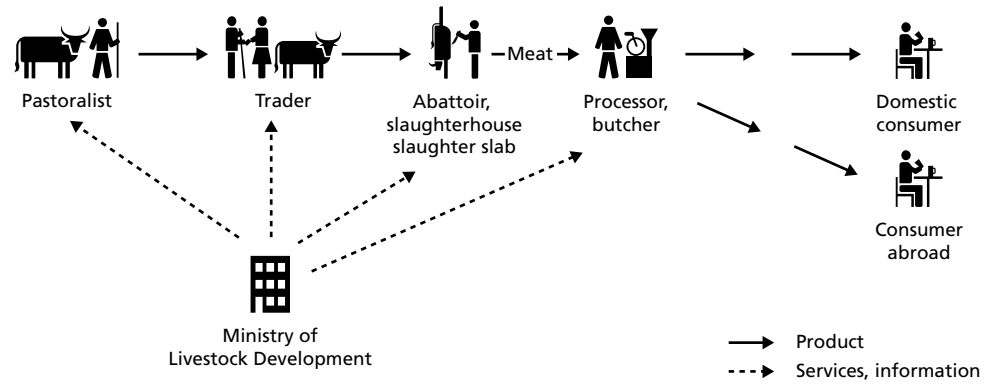
The government still controls the livestock markets, holding grounds, night camps and checkpoints. However, its general policy is to not engage in livestock marketing or production, so the Dodoma abattoir has been privatized. The Meat Industry Training Centre has been handed over to the government-owned but autonomous Vocational Educational and Training Authority.

## Problems remain

Not surprisingly, the project has not solved all the problems in Tanzania's livestock industry. Animals still have to be transported a long way to the abattoir. It is better to construct slaughter facilities near the production areas and to transport meat rather than live animals. Many pastoralists still do not see livestock keeping as a business, so the number of animals they sell has risen only slightly.

Informal trade across the borders into neighbouring countries persists. Although they offer better infrastructure and services, 10 border markets built by the project are not functioning. Pastoralists still use the alternative, informal routes, and the neighbouring countries do not regulate livestock movement or enforce trade legislation.

## Marketing chain



# Case 5 Unmined gold: Uganda Meat Export Development Programme



**Joshua Waiswa**

| | |
|---|---|
| **Title** | Uganda Meat Export Development Programme |
| **Location** | Uganda |
| **Commodity** | Beef |
| **Duration** | 2008–15 |
| **Objectives** | Improve the marketing of livestock by organizing cooperatives, marketing centres and an abattoir<br>Encourage members to save money for expanding and modernizing farms and provide them with loans to enhance their production and productivity |
| **Beneficiaries** | Pastoralists in Uganda's "livestock corridor" |
| **Key actors** | Uganda Meat Producers Cooperative Union Limited<br>Uganda Ministry of Agriculture, Animal Industry and Fisheries<br>Norwegian Ministry of Agriculture and Food<br>Nortura SA<br>Norwegian Agency for Development Cooperation (NORAD) |
| **Cost** | $5.65 million |
| **More information** | Joshua Waiswa, nabangijoshua@gmail.com |

Uganda is full of gold, according to a report published in 2006. But this is not the shiny stuff that has to be dug out of the ground (though the country has plenty of that too). Instead of precious metals, the study looked at the country's meat export prospects, and the "gold" it identified walks around on four legs – in the form of cattle.

Two-thirds of Uganda's cattle trade are concentrated in a corridor that runs across the country from northeast to southwest. Small-scale agropastoralists dominate production, but they raise their animals mostly for subsistence. The potential for exports is largely untapped.

There are a number of reasons for this. The meat sector does not meet the minimum requirements for exports because of a whole list of reasons: livestock disease, poor market infrastructure, outdated legislation, limited financial resources, poor animal-identification and traceability systems, weak animal welfare, poor breeds, inadequate services, the absence of good abattoirs, and so on. But the most glaring problem was a complete lack of organized cooperatives. The best way for livestock keepers to realize the wealth from their cattle was to form cooperatives, the study reasoned.

## Turning cattle into cash

The Uganda Meat Export Development Programme was the government's response. This multi-year initiative aimed to improve local livestock marketing and meat exports. It helped the livestock keepers to form local beef cooperatives, and then create an umbrella organization, the Uganda Meat Producers Cooperative Union Limited.





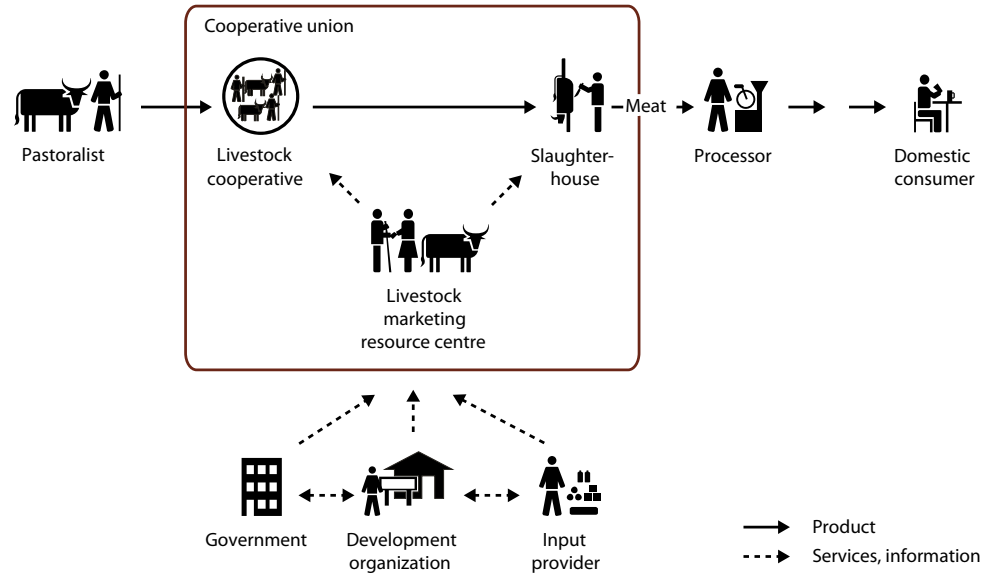
The initiative encourages the herders run their livestock enterprises as a business. It offers insemination services to improve breeding, promotes disease control, and enables the pastoralists to get involved in policy decisions.

The local cooperatives offer a variety of services to their members. They coordinate insemination services, with 1,000 cows inseminated in 2012 (up from 575 the previous year), and a conception rate of 70%. They market their members' animals: in 2012, 2,155 animals were sold through the cooperatives, up from zero in 2008. They also facilitate the training of their members in livestock management and business skills. The number of cooperatives has risen from four in 2008 (with 209 individual members) to 33 in 2012 (with 2,651 members) in 17 districts. Many of the cooperatives run businesses: there were 18 such enterprises in 2012. Profits per pastoralist rose from just $4 in 2010 to $77 in 2012.

Three marketing resource centres have been established in the cattle corridor. The programme has also established an abattoir, the Uganda Meat Farmers Company Ltd. This is a private-public partnership, with pastoralists owning 51% of the shares. Slaughter-line equipment came from Nortura, a Norwegian agricultural cooperative that operates abattoirs.

Women pastoralists and young people have benefited from the programme. More women now sell cattle: in 2012, over 250 women did so; the figure for 2008 was zero. Young people have got informal and formal employment in the livestock industry.

## Marketing chain



# Case 6 Inclusive management of cattle in Farakala, Mali

**Bonaventure Dakouo**

| | |
|---|---|
| **Title** | Inclusive management of cattle in Farakala |
| **Location** | Mali |
| **Commodity** | Live cattle |
| **Duration** | 2010–12 (2.5 years) |
| **Objectives** | Improve the market facilities and management in Farakala<br>Boost livestock keepers' incomes by improving the market chain |
| **Beneficiaries** | 30 cooperative members (18 men and 12 women)<br>Over 5,000 commune residents, 100 other livestock keepers and traders who buy and sell animals |
| **Implementer** | SNV |
| **Key actors** | Union Régionale de la Filière Bétail et Viandes (Regional Union of Livestock and Meat, URFBV)<br>Coopérative Agropastorale de Farakala (a member of URFBV)<br>Municipality of Farakala<br>European Union (donor) |
| **Cost** | FCFA 10 million ($20,000) |
| **More information** | Francine Obura, fobura@snvworld.org, +223 20 33 33 47 or Denis Edah, +223 21 62 27 15, www.snvworld.org |

Thursday is market day in Farakala. People come to buy, sell, meet and talk. There is a brisk trade in food, clothes and household items. But the livestock market used to be very quiet. It was in poor condition: it consisted just of an open area with livestock pens made of mud brick – which is easily damaged by cattle and rain. Because the market lacked a perimeter fence, people could come and go as they pleased. That made it impossible to charge user fees, and thefts were common.

The market was managed by a local cooperative of livestock keepers – the Coopérative Agropastorale de Farakala – but it had no money to invest in the facilities. The market was not an attractive place for large-scale traders to come to buy fattened cattle. So cooperative members preferred to take their animals to Sikasso or Niena, larger places a day's trek away, where there were more traders and sellers could expect a higher price. But trekking the fattened animals was risky: they could not be fed or watered along the way, and many arrived thin and exhausted.

## Joint market management

The European Union agreed to finance a new market, but on condition that the local municipality owned the facilities. SNV helped the municipality, cooperative and the regional union to agree on what facilities to build and how to manage them. The municipality did not have the staff or capability to manage such a market, so it transferred responsibility for management to the cooperative. The district government of Sikasso provided land for the new market, and the project constructed permanent livestock pens, a surrounding wall and gates, and other facilities. That made it possible to control the movement of animals in and out of the market, and to collect fees.





The project trained members and leaders of the cooperative, as well as the managers and staff of the municipality, on how to manage the market and deal conflicts that arise while the animals are being trekked there. Formal agreements were made to specify who was responsible for what.

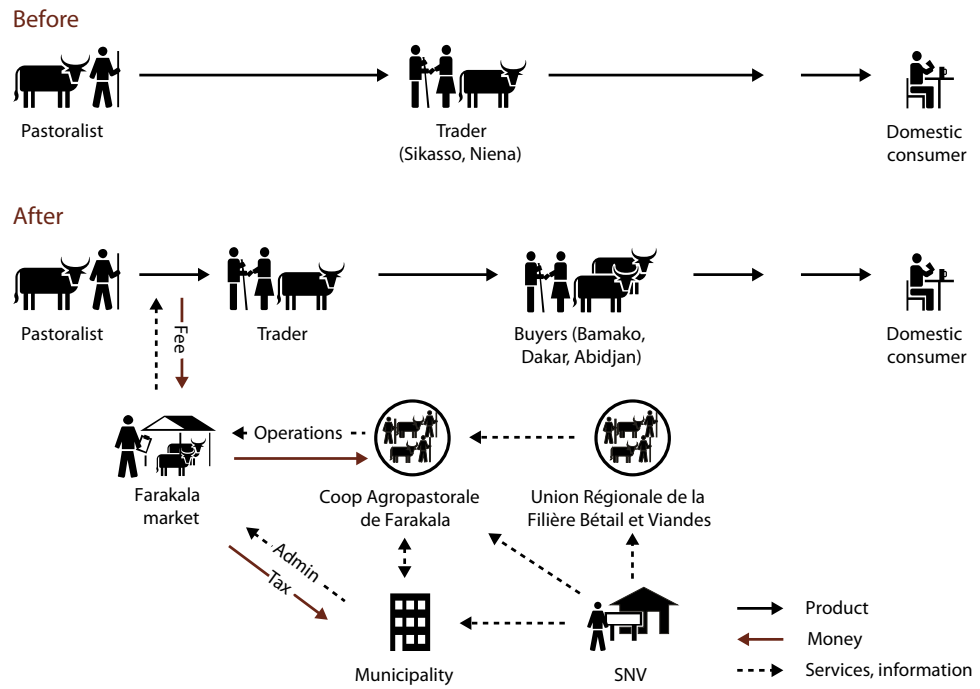
The cooperative collects a fee of FCFA 150 (about 30 US cents) for each animal bought or sold in the market. One-quarter of the fees go to the municipality; the cooperative uses the rest to pay for running the market and for maintenance. It has used some of the profits to build a ramp to load animals onto lorries. It charges a fee of FCFA 5,000 ($10) for loading a lorry.

To deal with theft, the cooperative has set up surveillance committees in the surrounding villages to check the identity of animals being herded to and from the market. The committees are empowered to detail any suspicious herds until their legality is established.

## A busy place

The livestock market is now a busy place on Thursdays. The number of cattle sold each week has risen from 40 in 2011 to 55 in 2012. Revenues have also risen, from zero in 2010, to FCFA 8,200 ($16) per week in 2012. Nearly all the animals that local breeders raise are now sold in Farakala. A dozen or so traders from Sikasso and Segou come to the market to buy stock – something that happened very rarely before. Some 15–20 livestock keepers sell each week. The number of animals sold and income generated may seem small, but the crowds are attracting people to buy and sell sheep, goats, food, and other items. The livestock sellers save money on transport or trekking, and can spend their newly earned money in Farakala rather than in the bigger towns. The municipality and cooperative have a sustainable source of income, and the number of thefts reported has fallen to zero. Relations between the commune administration and the market users have improved.

### Marketing chain



# Case 7 Governance and self-management of cattle markets in Benin



**Albert Y. Houedassou**

| | |
|---|---|
| **Title** | Governance and self-management of cattle markets: A solution for local development in Benin |
| **Location** | Benin |
| **Commodity** | Live cattle |
| **Duration** | 2009–11 |
| **Objectives** | Strengthen management and transparency in the cattle market<br>Improve breeders' incomes and increase the budget of the municipality of Bassila. |
| **Beneficiaries** | 6,875 cattle breeders (UCOPER members)<br>Market management committee<br>Municipality of Bassila |
| **Implementer** | SNV Netherlands Development Organisation |
| **Key actors** | UCOPER<br>Market traders<br>Municipal council of Bassila<br>United States African Development Foundation (donor) |
| **Cost** | $14,700 |
| **More information** | Albert Y. Houedassou, SNV, ahouedassou@snvworld.org, www.snvworld.org |

Livestock markets in Benin have traditionally been controlled by influential local businessmen known as *dilaalis*, who acted as intermediaries between livestock sellers and buyers – making big profits for themselves in the process. This brokerage role was a long-standing practice that aimed, in part, to help pastoralists to negotiate their way in the market. But it had evolved into a secretive transaction that mostly benefitted the broker. In the cattle market, each *dilaali* would delineate his own space, where he would drive in stakes where he would tie the sellers' animals. The *dilaali* would then give the seller a small amount of money (around FCFA 100) to go and "buy food", or ask him to wait under a tree. With the seller out of the way, the *dilaali* would agree on a price with the buyer. Unaware of the real price paid for the animal, the seller's bargaining position was undermined, and he would have to accept the price offered. The *dilaali* kept the balance for himself.

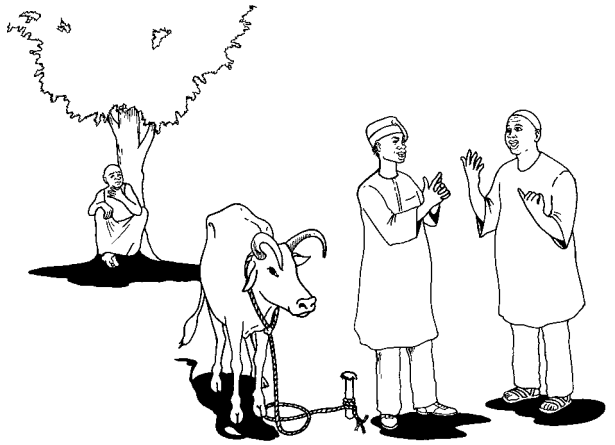
When Benin was decentralized in 2000, the *dilaalis* came under increasing criticism from livestock sellers as well as the local governments, which could not collect market fees because of a lack of financial records. The lack of transparency and professionalism in managing the market was a bottleneck in raising the incomes of both the local government and the producers.

In 2009, UCOPER, a breeders' organization in the municipality of Bassila in northern Benin, asked SNV for help. SNV began to work with local people to improve the management of the livestock market in Doguè, a town in the municipality.





*The dilaalis used to broker deals. Now they supervise transactions and maintain records.*



## Professionalizing brokers

SNV helped create a general assembly of all the market stakeholders, and a market management committee to represent each group. SNV helped the stakeholders to develop a new vision for the market and inform everyone about how they would all benefit. It established a market fund, which collects fees per animal sold: FCFA 1,000 ($2) from the buyer and the same amount from the seller. It also charges parking fees for vehicles. The committee members were trained in budgeting and financial management so they could use revenues from the market effectively for local development.

SNV also addressed the professionalization of the *dilaalis*. Rather than brokering individual cattle sales, they were given a new role: supervising market transactions in their allotted area, ensuring the traceability of all animals sold, and maintaining transparent records to ensure revenue was collected properly. They were paid FCFA 500 ($1) per animal sold in their space. This is as much as they would earn from a typical sale under the old system.

The donor and the market fund co-financed improvements in the market infrastructure: fencing, an administration building with an office, meeting room and store, a sanitation block, loading ramp, and a water point with a drinking trough. They invested a total of FCFA 95 million ($190,000) in these improvements.

## An attractive place to buy and sell

The management committee consists of 11 members, elected by the traders, sellers and *dilaalis*. It implements decisions made by the general assembly, which meets at least four times a year – and more often if necessary.

The livestock keepers, the weakest players in the marketing chain, used to be at a disadvantage compared to the market brokers. They are now empowered, and can negotiate a more realistic price for their animals. The *dilaalis* offer a professional service that maintains order in the market and collects revenue for the government. Because of this, the market has become an attractive place to buy and sell.

The number of animals bought and sold has increased, and the market's turnover rose from under $2,600 in 2008 to over €20,000 in 2011. The market's contribution to the local authority's

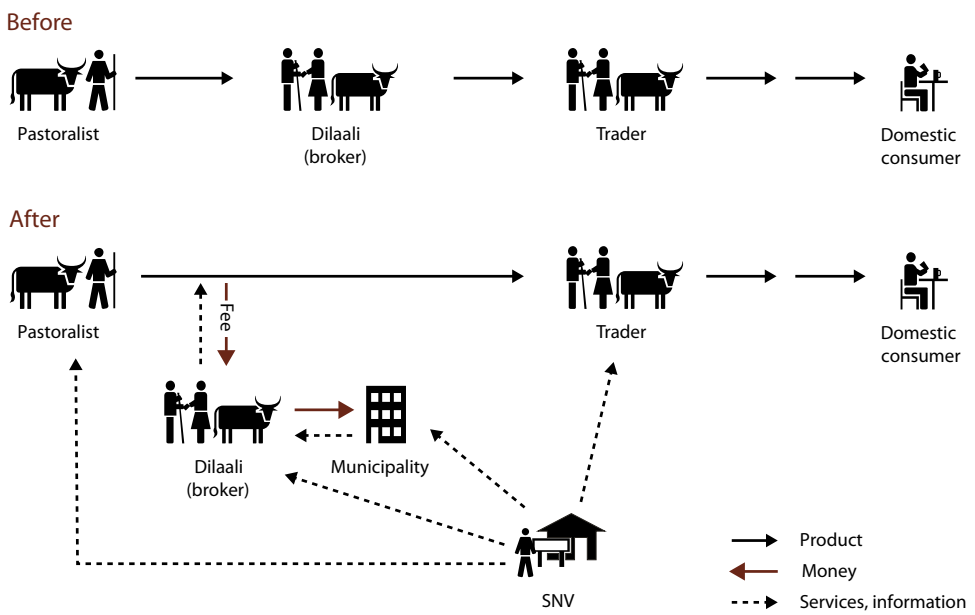
budget has multiplied tenfold in just two years: from annual revenues of under $600 in 2008 to over €6,500 in 2011.

The positive results are an inspiration for other livestock markets in the region. A 3-year pilot project has been launched in the neighbouring markets at Atacora and Donga to replicate the approach.

Since 2008, the number of permanent market employees (secretaries, controllers and dilaalis) has doubled from 17 to 36. More than twice this number benefit indirectly from the new jobs. Most are young people, who no longer have to leave the area in search of work.

The market is now a busy place. Vendors come to sell things like food, drink, clothes, ropes and even motorbikes. The bustle attracts still more customers, boosting economic activity in and around the area.

### Marketing chain






# Meat and leather

# Case 8 From raiding to trading: The Lomidat slaughterhouse in Kenya

**Sylvester Nyadero**

| | |
|---|---|
| **Title** | Lomidat slaughterhouse |
| **Location** | Kenya |
| **Commodity** | Live animals, meat |
| **Duration** | Since 2008 |
| **Objectives** | Establish a steady market outlet for livestock in Turkana and neighbouring areas<br>Slaughter animals during a drought to reduce losses of livestock<br>Create employment opportunities for the local community<br>Promote peace through livestock trading instead of raiding |
| **Beneficiaries** | Pastoralists in Turkana district, northwestern Kenya |
| **Implementer** | Turkana Meat Processors Co Ltd, Lomidat Slaughterhouse |
| **Key actors** | Lomidat Pastoral Multipurpose Co-operative Society Limited<br>African Medical and Research Foundation (AMREF)<br>Terra Nuova<br>Government of Italy (donor) |
| **Cost** | $1,300,000 |
| **More information** | Sylvester Nyadero, nyadero@gmail.com, www.lomidatmeat.co.ke |

Turkana district, in northwestern Kenya, is big, dry and dusty. Its half-million human inhabitants are far outnumbered by some 3.3 million livestock, including 200,000 cattle, 2 million goats, and 1 million sheep.

Until recently, the district's pastoralists found it difficult to sell their animals. They relied on a network of small, medium and large traders and butchers, who often bartered livestock for cooking pots, beads (used to make traditional decorations) and other items. There was little cash in the local economy, and, ignorant of the true value of their animals, the pastoralists often got a raw deal. They were understandably hesitant to sell animals – a reluctance reinforced by the advisability of maintaining a lot of animals as a way of surviving the periodic droughts that plague the area.

Indeed, local people regard a large herd as an indicator of wealth, much as urban people look at the size of their neighbours' house or car. Raiding livestock from other groups is traditional in the area. Rustling parties used to carry bows and arrows; now they are armed with automatic weapons, making raids far more dangerous.

The shortage of cash and the lack of security have severely restricted economic activity in the district, which remains one of the poorest in Kenya. Since the end of the Sudanese civil war, several aid organizations have moved their offices across the nearby border into newly independent South Sudan. That is good news for South Sudan, but has deprived Turkana district of an important source of employment and income.





## Creating a cash economy

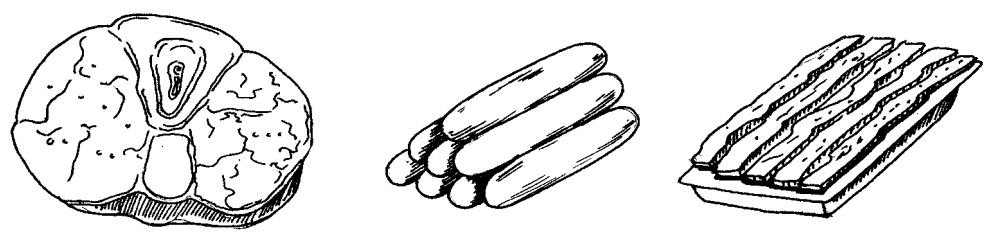
How to create a more efficient market and enable the pastoralists to benefit from a cash economy? In 2008, Terra Nuova and AMREF, in collaboration with the Turkana County Council, established a slaughterhouse at Lomidat, about 9 km from the town of Lokichoggio, to serve the needs of pastoralists in the district.

The owners of the slaughterhouse are the members of the Lomidat Pastoral Multipurpose Co-operative Society Limited, an association of pastoralists who supply animals to the slaughterhouse. Members paid a fee of KSh 500 ($5.75), and also bought shares in the cooperative: the minimum shareholding is KSh 2,000 ($23). The members earn dividends based on their shareholdings. The cooperative currently has 1,500 members (three-fifths of them women), of whom 700 are fully paid-up.

The slaughterhouse has about 1,000 hectares of land, kindly donated by Turkana County Council to the cooperative. Two hectares are fully fenced; the remaining land is used as a holding ground for the livestock awaiting slaughter. The slaughterhouse has its own borehole and a 35,000 litre high-level water tank. It takes electricity from the national grid to power cooling cabinets and other equipment. A standby generator supplies power if the grid supply breaks down. It is the only government-licensed slaughterhouse in the district.

Butchers and flayers (who do the slaughtering and cut the carcass into halves) recruited from the local community have attended training at the Meat Training Institute and the Kenya Meat Commission. Other training has covered hygiene, occupational safety, first aid, animal health, HIV/AIDS, and craftwork using bone. Workers' skills are continuously improved through on-the-job training.

Five new livestock market centres have been built in various areas of Turkana county (in Lokori, Namorouputh, Lokangae, Letea and Kanakurudio), and a sales yard at Kakuma has been rehabilitated. The idea is to start regular market days at these centres to attract both buyers and sellers. A buyer from the slaughterhouse, accompanied by a cooperative member, will visit these centres to buy animals. Other buyers can also purchase animals for their own needs. The centres are not yet fully operational, but the first few events have been held and have attracted a lot of custom.



*Prime cuts of meat, sausages and striped meat are among the Lomidat slaughterhouse's products.*

### Trade, not raid

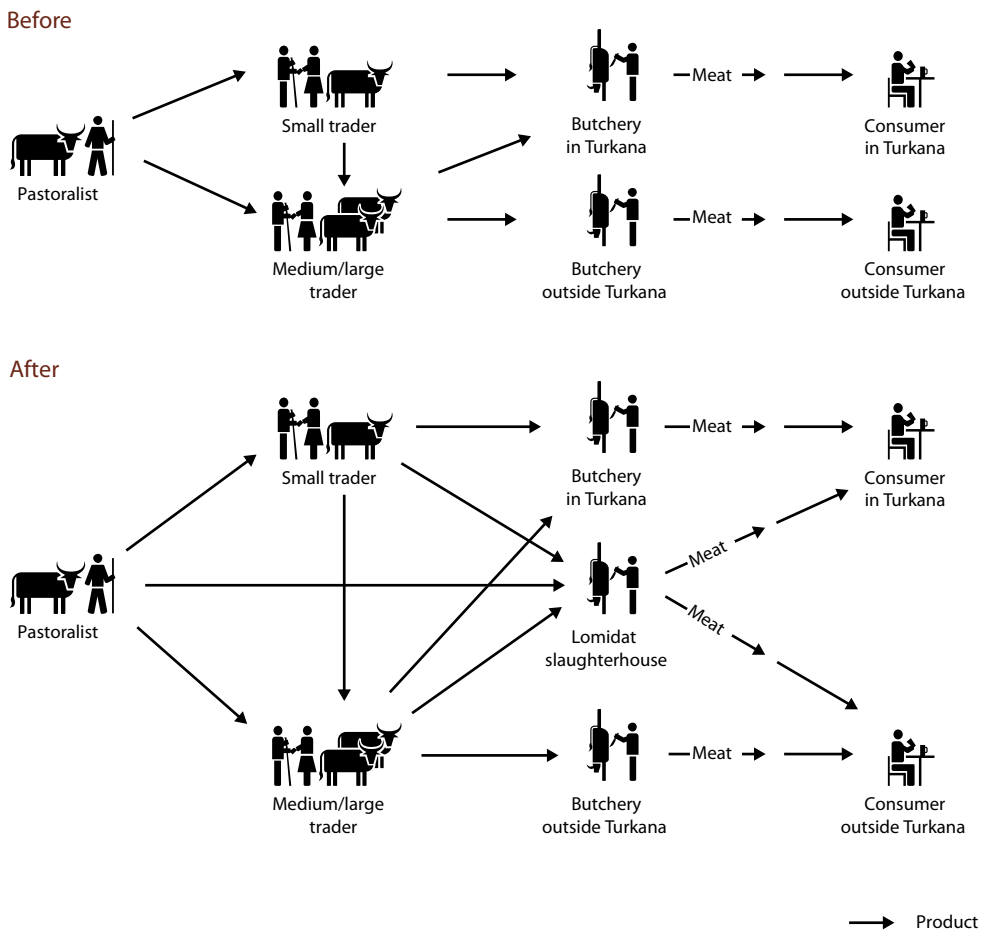
The slaughterhouse employs 28 staff (22 of them ethnic Turkana). Employment priority is given to local people. A cottage industry to make bone ornaments is developing.

Lomidat has been certified by the government as a class "A" abattoir. This means that it can now sell its meat and meat products in the whole country. It is looking forward to certification as an export slaughterhouse. It has signed an agreement to supply carcasses and meat directly to niche markets in Nairobi. The slaughterhouse has a refrigerated lorry to deliver products to distant locations.

The slaughterhouse has established a cash market for animals. That encourages peaceful trading rather than the frequent raids.

The slaughterhouse can slaughter large numbers of animals if there is a drought in the area and pastoralists need to reduce their herd sizes because of lack of feed and water. It aims to extend its procurement to other districts in Kenya (West Pokot, Baringo and Samburu), as well as South Sudan and northeast Uganda.

### Marketing chain








# Case 9 Lobatse abattoir in the beef marketing system of Botswana

**Anthony Kimotho Macharia**

| | |
|---|---|
| **Title** | Lobatse abattoir |
| **Location** | Botswana |
| **Commodity** | Beef |
| **Duration** | 1952–2012 |
| **Objectives** | Provide a market for pastoralists' cattle<br>Support development of beef industry |
| **Beneficiaries** | Pastoralists<br>Traders (wholesalers, retailers and butcheries) |
| **Implementer** | Botswana Meat Commission |
| **Key actors** | Botswana Meat Commission<br>Veterinary departments<br>Pastoralists' associations |
| **Cost** | $28 million annual turnover |
| **More information** | Anthony Macharia, machariak@gmail.com; Botswana Meat Commission, www.bmc.bw |

Pastoralists are the main livestock raisers in Botswana. Exports of live cattle and beef have long been a vital source of income for the country. Before independence in 1966, the pastoralists used to sell one or two cattle to European traders so they could buy grain and other items. The traders exported them to South Africa. In the early 1950s, the colonial administration established the Lobatse abattoir, 70 km southwest of Gaborone, so it could export beef to the United Kingdom, the colonial power. In 1965, the abattoir was transferred to the control of the newly created Botswana Meat Commission. This is the only entity allowed to export live cattle and beef.

When the United Kingdom joined the European Union in 1973, the abattoir was upgraded to conform to new, more stringent standards, and it was accredited for the European market. The abattoir is obliged to accept all the cattle that pastoralists deliver to it. It slaughters the animals, grades the meat, and chills or freezes it before export. It also supplies local wholesalers, retailers and butcheries. The abattoir pays the best prices for good-quality animals.

### Three ways to source cattle

The Lobatse abattoir encourages pastoralists to supply young animals, which produce tender meat that fetches a high price. It operates three schemes to do this:

- The **Feedlotters Advance Scheme** gives loans to feedlots to buy young animals from pastoralists, fatten them up and deliver them to the abattoir after 40–90 days.
- The **Cattle Feed Advance Scheme** advances a cheque to pastoralists so they can buy feed for the animals that they will deliver to the abattoir. To prevent misuse, the cheque is made out to the feed supplier rather than the pastoralist.

- The **Direct Cattle Purchase Scheme** pays the pastoralists part of the price of their animals in advance. The animals are branded as being owned by the abattoir. The pastoralists can use this money to fatten the cattle before delivering them to the abattoir.

The Botswana Meat Commission has a monopoly over livestock exports. To ensure that pastoralists get a fair price, it has to pay the same price as in equivalent markets in neighbouring South Africa. This is higher than the domestic price offered by butchers in Botswana. After it has covered its costs at the end of the year, the abattoir distributes any surplus funds as a bonus to the pastoralists who have supplied it during the year.

Together with the veterinary department, the abattoir informs pastoralists about the requirements of the beef for export and the prices they can expect. This information includes hygiene, transportation, disease control and the age of animals. The abattoir uses the mass media, and organizes village meetings and field days with the cattle producers' association and other stakeholders.

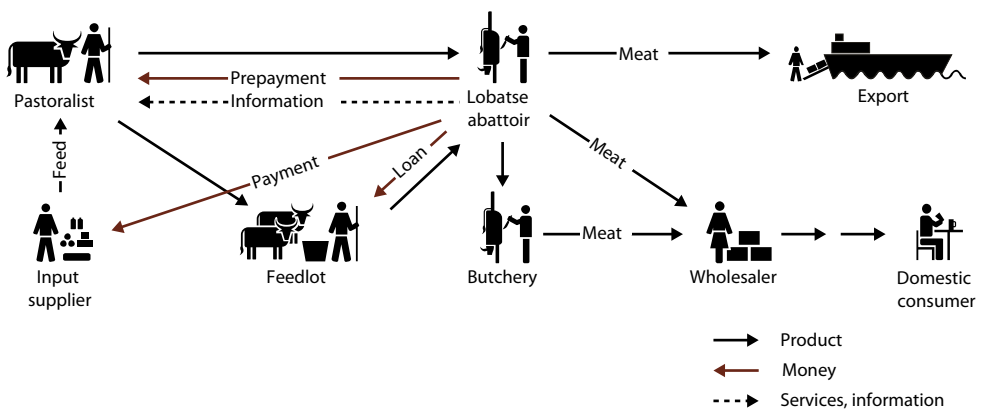
### Achievements and challenges

In 2011, over 4,000 pastoralists supplied 91,000 cattle to the Lobatse abattoir. Some individuals provided just one animal; others supplied more than 200 a year. Numbers vary from year to year depending on disease outbreaks, drought and other factors. The annual turnover of the abattoir is about $28 million.

The abattoir faces various challenges:

- As Botswana's population grows and the country develops, local demand for quality meat is rising. Local butchers are increasingly competing with the abattoir for the best animals.
- Competition from other exporters such as the USA, Australia and Brazil is increasing, and customers' requirements are changing.
- A lack of insurance makes it hard for pastoralists to deal with shocks such as disease outbreaks. Such outbreaks also mean the abattoir currently cannot export to the European Union.
- To comply with the European Union requirements, the abattoir has to be closed periodically for refurbishment.

### Marketing chain








# Case 10 Making something from nothing: Tanneries in Tanzania

**Godfrey Chasama**

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|---|---|
| **Project title** | Training strategy for a commercially viable value chain |
| **Location** | Tanzania |
| **Commodity** | Hides and skins |
| **Duration** | 2009–11 |
| **Objective** | Form cooperative tanneries to process hides and skins into leather goods |
| **Beneficiaries** | Pastoralists in Maswa |
| **Implementer** | Tanzania Livestock Research Institute, Mabuki |
| **Key actors** | Agricultural Research Institute, Ukiriguru<br>Maswa District Council<br>Small Industries Development Organization<br>Zonal Agricultural Research and Development Fund (funder) |
| **Cost** | $6,000 |
| **More information** | Godfrey Chasama, Tanzania Livestock Research Institute, Mabuki, chasmagod@yahoo.co.uk |

Few Tanzanian pastoralists make much effort to produce quality hides and skins. Their indifference is justified – the traders who buy the products pay as little as $0.06 per hide or skin. This low return makes these products virtually worthless – and the effort to produce them a waste of time. But if these raw products can be turned into leather goods, the story is very different.

The district council in Maswa, a town near the western city of Mwanza, realized that the local pastoralists were missing out on a potentially significant source of income. So it asked the Tanzania Livestock Research Institute in nearby Mabuki for help. Together, they designed a project to start tanneries to process the hides and skins into higher-value products.

*The tanneries turn a previously worthless byproduct into a valuable item.*

The project organized 69 pastoralists in Maswa into three groups, each of which registered as a cooperative tannery. They were then trained how to process the hides and skins into shoes, bags, belts and other leather goods. Traditional training techniques were supplemented with demonstrations and excursions.

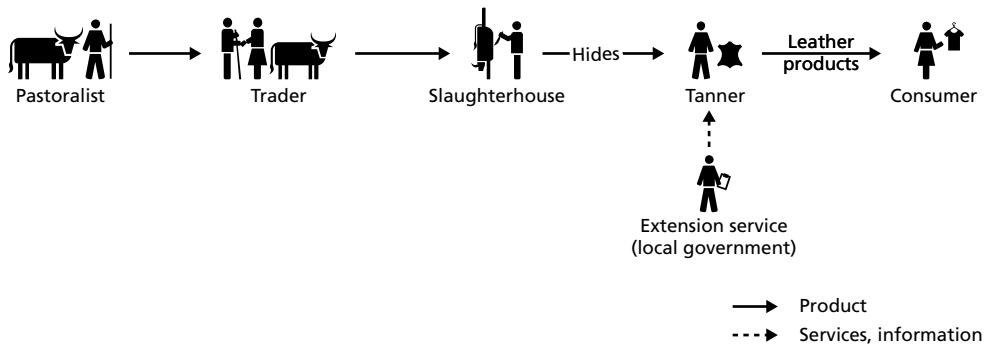
After the training, each group was provided with $600 as start-up capital. The leather goods they produce are now sold at each tannery, in local markets, and at exhibitions and trade fairs outside Maswa.

### Big returns from hides and skins

On average each month, the three tanneries together process a total of 28 hides and 48 skins, and earn a profit of $6,133. This is more than the grant from the Zonal Agricultural Research and Development Fund, so over a year, the investment brings returns 12 times the original investment.

The tanneries now buy quality hides from pastoralists for $1.33 each, and skins at $1.00 each. That is roughly 10 times what the producers used to get from traders. The tanneries now offer significant incentives to the pastoralists to produce quality raw products. Both the tannery operators and the herders now earn from a commodity that used to bring them nothing.

### Marketing chain






# Dairy

# Case 11 Formalizing *faraqa annani* women's milk-marketing groups in Ethiopia

**Binyam Kassa**

| | |
|---|---|
| **Title** | Formalizing *faraqa annani* women's milk marketing groups |
| **Location** | Ethiopia |
| **Commodity** | Cow milk |
| **Duration** | 2007–11 |
| **Objective** | Improve livelihoods of women pastoralists through increased participation in the milk market |
| **Beneficiaries** | Pastoralist women of Kereyu and Hawssa communities |
| **Implementer** | Mieso Pastoralist Secretariat (a local government extension office) |
| **Key actors** | International Livestock Research Institute (ILRI): Improving Productivity and Market Success initiative<br>Save the Children, Mercy Corps |
| **Cost** | $50,000 |
| **More information** | Zelalem Yilma, zeyilmak@yahoo.fr; Biruk Hailu, burew2@gmail.com; Binyam Kassa, binyam.kassa@gmail.com |

Women in the Kareyu and Hawssa agropastoralist communities in Ethiopia's mid-Rift Valley have a tradition of working together to sell milk. They run groups they call *faraqa annani* (Afan Oromo for "milk rotation"). Each group has 2–4 members, who take turns to collect milk from the other group members – the same amount from each one. The woman goes from door to door to pick up the milk, then takes it to market to sell.

That is better than each of the women trying to sell small quantities of milk on her own: when it is her turn, she has enough milk to make a trip to the market worthwhile. She can spend the income how she pleases.

But the system is also inefficient. Collecting milk from door to door takes time, and it is a long way to the market. The market price is unpredictable, and the woman would often try to sell her milk cheaply so she could get home. If she did not manage to sell it all, she had to bring it home again and turn it into sour milk or butter.

## Improving an existing system

In 2008, the Mieso Pastoralist Secretariat helped two sets of *faraqa annani* groups reorganize themselves as cooperatives: the 28-member Lesitu Annani Gorbo Dairy Cooperative in the Kereyu community, and the 15-member Eskunfalan Dairy Cooperative, from the Hawssa community. A central milk collection and bulking point was established for each cooperative.

The two cooperatives collaborated: Eskunfalan cooperative was in a remote location, far from a market, so it was linked to the Lesitu Annani Gorbo cooperative, which is closer to Mieso town. The project trained the women on how to manage a modern dairy, for example, on hygiene and record keeping. ILRI donated a modern churn so they could make butter efficiently, as well as





*The cooperatives enable their members to save time and earn more for their milk.*

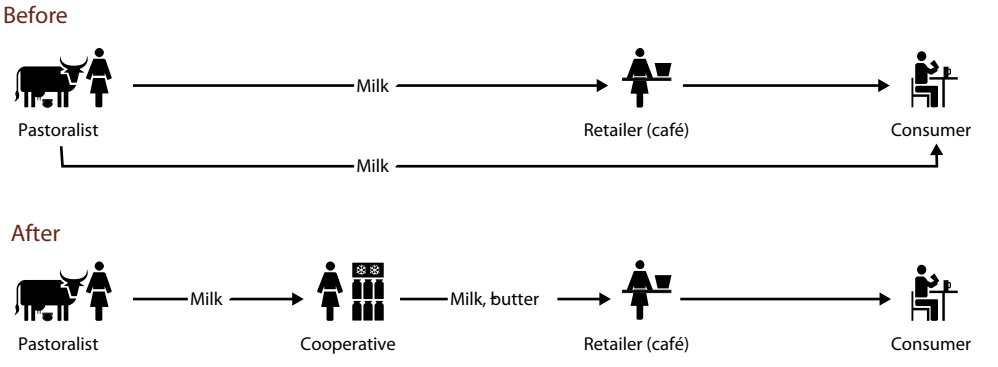
a refrigerator. The cooperatives negotiated milk prices and supplied their members with market information. They also provided improved forage to supplement traditional livestock feeds.

## Economies of scale

The women can now take their milk to the nearby central collection point, instead of having to go round the houses and then haul it to the market. They have learned how to manage a modern dairy business. They cannot yet use their refrigerators, though, as their area still has no electricity.

Selling in bulk has meant better prices: $0.55 per litre, compared to $0.22–0.44 per litre before. The assured market has reduced wastage, as they can now sell all the milk they produce. Bulking has let them increase the quantity of milk they sell to 100–240 litres per day. Before, they sold only 23–30 litres. They can also make and sell butter for $8.30 per kilogram.

## Marketing chain



# Case 12 Urban camel-milk production in Ethiopia

**Abdurehman Eid**

| | |
|---|---|
| **Title** | Urban camel-milk production in Ethiopia |
| **Location** | Ethiopia |
| **Commodity** | Camel milk |
| **Duration** | Since 1998 |
| **Objective** | Create a sustainable market for camel milk and generate income for pastoralists |
| **Beneficiaries** | Pastoralist households (especially women) |
| **Implementers** | Pastoralists |
| **Key actors** | Caafi Mascuud (a camel herder)<br>Somali Region Pastoral and Agropastoral Research Institute |
| **Other actors** | Annual Ethiopian pastoralist day (advocacy event that promotes networking among pastoralists, policymakers, donors and development practitioners) |
| **Cost** | None |
| **More information** | Abdurehman Eid, abdurez4000@yahoo.com; Seid Mohamed and Abdi Abdullahi |

Pastoralists around the town of Godey, in arid southwestern Ethiopia, follow a seasonal pattern when herding their camels. In the dry season, they keep them near the river, where pasture is more plentiful. But in the rainy season, they drive them further away so as to conserve the riverine pastures for grazing later in the year.

The camels give birth and start producing milk during the rainy season, when the animals are far from the town. The distance makes it hard for the women, who are responsible for managing the milk, to bring it to town for sale. Being away from home a long time can result in quarrels with their menfolk. In the dry season when the herds are closer to the town and marketing is easier, the sparse pasture means that there is less milk to sell. The result: the women earn little from the milk, a lot of milk in the rainy season goes unsold, and urban consumers have to look for other sources of milk.

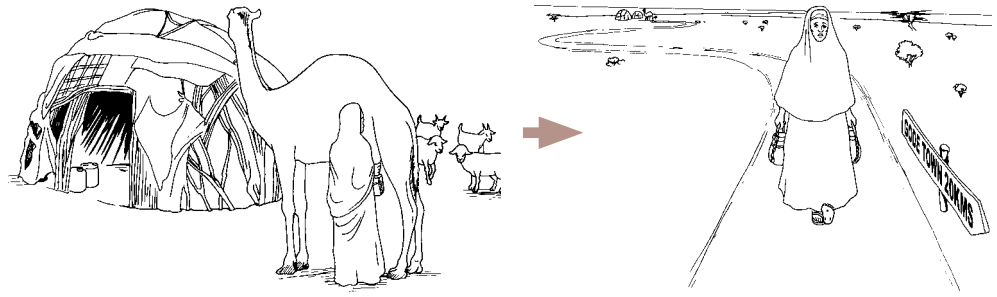
## A camel comes to town

Caafi Mascuud was the first to find the solution to this problem: he started keeping camels in the town. It started by accident: in the early 1990s, he brought a she-camel to town to sell so he could pay for his wife's medical expenses. When he failed to sell it, he was not ready to take it back to his rural home, so he kept it at a relative's compound in the town. Then it gave birth, and started to produce milk. He had been to other countries and seen camels kept in towns to produce milk. Why, he reasoned, could he not do the same?

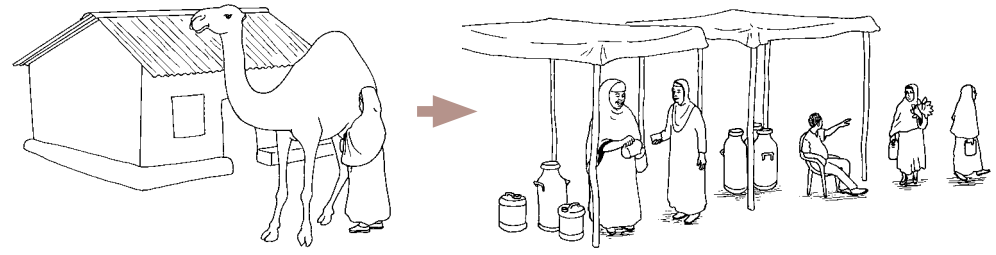
This was a bigger step than it sounds: Ethiopian pastoralists think that camels kept in town will become ill and may even die. They say that camels should stay in the countryside, where they can graze on natural pastures. And they consider cultivation as a dirty job, so rarely grow forage crops.







*Before: Camel-raisers milked their animals in the rangeland, but had problems selling the milk.*



*Now: They keep some milking animals in town, where they can sell the milk easily.*

Caafi's innovation has led to a new pattern of milk production around Godey. More and more camel herders started copying him, and the number of camels kept in and around the town boomed. Farmers grow crops on land near the river, and sell them to the pastoralists as forage. Some pastoralists have started growing forage to feed to their camels. They keep non-milking animals in the rural areas as before.

The Pastoral and Agropastoral Research Institute in the Somali Region has helped by studying which types of fodder can be grown, and by providing technical advice on veterinary services.

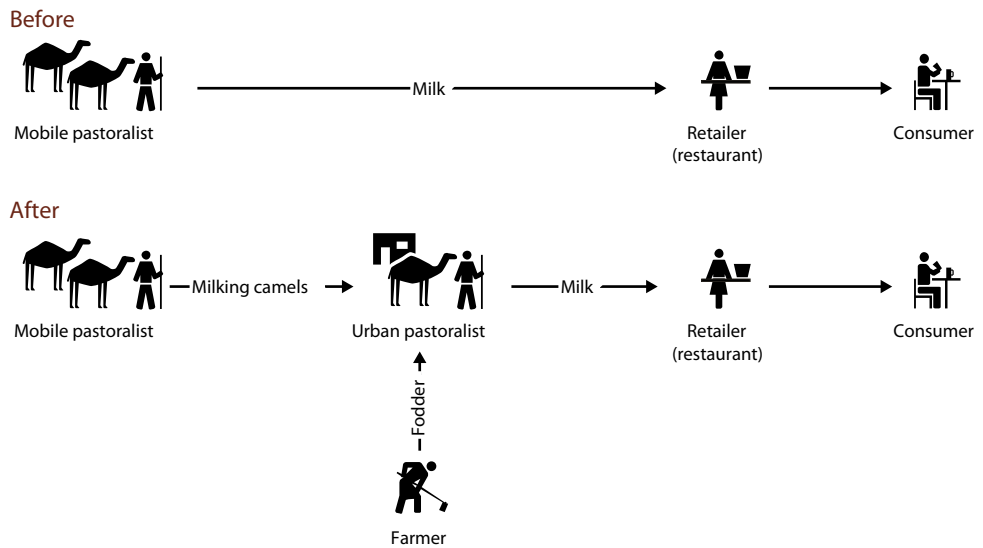
## Milk is money

This innovation has had benefits all round. Urban consumers get fresh milk, the pastoralists can now earn an income, and the farmers have a market for their forage. The pastoralist women no longer have to walk a long way to sell the milk, and have fewer quarrels with their husbands.

The creation of a market for forage has had big benefits. In the 2008 drought, it was reported that around 17,000 camels were saved by forage produced by farmers in the Godey area. The different groups have come to realize that they depend on one another.

The better-quality fodder has boosted the average household's milk production to 4.5 litres a day. With an average price of 13.8 birr per litre, an urban pastoralist household earns around 62 birr ($3.50) a day. This income has enabled them to buy land and build houses in the town.

**Marketing chain**








# Case 13 Building rural dairies: The East Africa Dairy Development Project, Uganda



**David Balikowa**

| | |
|---|---|
| **Title** | East Africa Dairy Development Project |
| **Commodity** | Cow milk |
| **Countries** | Uganda, Kenya and Rwanda |
| **Duration** | 2008–12 |
| **Objective** | Raise dairy incomes through improved production, market access and technologies |
| **Beneficiaries** | 179,000 smallholder dairy farmers and agropastoralists |
| **Key actors** | Heifer International<br>International Livestock Research Institute<br>TechnoServe Inc.<br>World Agroforestry Centre<br>African Breeders Service<br>Bill and Melinda Gates Foundation (donor) |
| **Cost** | $42 million |
| **More information** | David Balikowa, National Agricultural Research Organisation (NARO), dbalikowa@gmail.com, www.naro.go.ug |

There are plenty of cattle in central Uganda, but there is surprisingly little milk. This is partly because the indigenous cattle breeds yield little, so the typical pastoralist or agropastoralists household produces only between 5 and 20 litres a day. But it is also partly because of problems in marketing. Small-scale traders pick up milk from producers each day. They do not have four-wheel vehicles, so they buy only what they can carry on a bicycle or motorbike: 100–150 litres at a time. They deliver jerry cans full of warm milk to transporters, who load them onto pick-ups and rush them to Kampala for sale.

The dairy farmers earn only USh 100–200 (5–10 US cents) per litre, so they cannot afford medicines or feed to improve their output. The uncooled milk would spoil, fetching low prices in the city. Many traders were tempted to add chemicals to reduce the acidity caused by spoiling, and to add water to increase the volume and boost their earnings.

## Kiboga West Livestock Cooperative Society

Heifer International's East Africa Dairy Development Project started tackling this problem by organizing the milk producers into dairy interest groups and an associated cooperative, named Kiboga West Livestock Cooperative Society in central Uganda. By 2009 the cooperative had 560 members; four years later, membership had risen to 1,164.

The Kiboga West Livestock Cooperative is one of several dozen dairy groups supported by the East Africa Dairy Development Project in Uganda, Kenya and Rwanda.

The Kiboga cooperative raised money for a milk-chilling plant by selling shares to members. It supplemented this with a bank loan and a credit facility from the project. It used this capital to buy a 5,000-litre milk cooler and accessories, a 10,000-litre water tank and a generator (since the area had no electricity). The cooler was installed in March 2009, and within 2 years the cooperative had saved enough to buy a second one.

The cooperative set up milk-collection centres in the surrounding area, where milk collectors and individual farmers deliver milk every morning using bicycles and motorcycles. The milk is tested and graded there, before being taken in hired trucks to the chilling plant. The cooperative also hires an insulated tanker lorry to deliver the chilled milk to Sameer Agriculture and Livestock, Uganda's largest dairy.

### More milk, higher prices

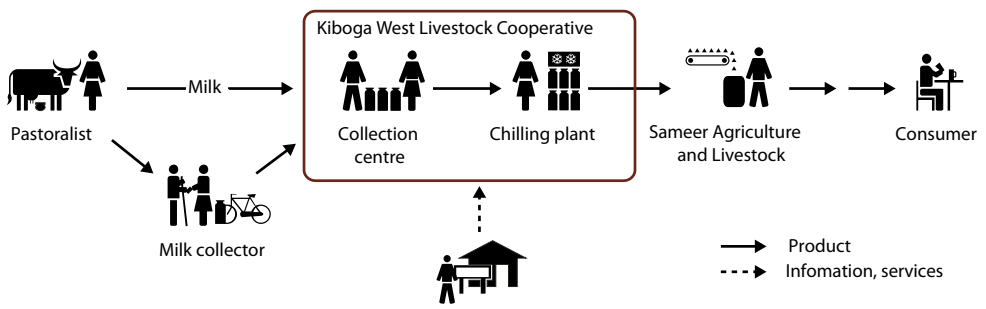
The Kiboga cooperative has become a hive of activity, collecting milk, testing, grading and chilling it, before transporting it to the city and marketing it. It coordinates the provision of support services for its members, including milk testing and grading, animal health services, feeds and feeding, artificial insemination, an agricultural input shop, and savings and credit services. It also organizes farmer training, exchange visits, business opportunity seminars and field days.

The cooperative has hired and trained professional staff to manage the chilling plant and market the milk. The project has invested in building the capacity of the cooperative leaders to ensure it is governed well.

An important innovation has been the use of vouchers to pay for services. The cooperative issues vouchers to members, who can use them to pay for services and inputs on credit. The service providers present the vouchers to the chilling-plant management for payment. The chilling plant then deducts the equivalent amount from the amount it pays to producers for their milk.

These interventions have nearly quadrupled the price of milk that the cooperative members receive, from 7 to 26 US cents per litre. They can now to sell all their milk in both the wet and dry seasons, and can invest in improved dairy animals to produce more milk.

### Marketing chain








# Case 14 Boosting milk production through local dairies in Burkina Faso

**Brigitte Tipoco Ouedraogo**

| | |
|---|---|
| **Title** | Boosting milk production by supporting the emergence of local dairies |
| **Location** | Burkina Faso |
| **Commodity** | Cow milk |
| **Duration** | 2010–11 |
| **Objective** | Increase producers' incomes by promoting milk production. |
| **Beneficiaries** | Pastoralist families, milk collectors, milk-processing workers, retailers, consumers |
| **Implementer** | Netherlands Development Organisation (SNV) |
| **Key actors** | Socoprolait |
| **Cost** | €13,795 from SNV; €45,735 from Regional Council |
| **More information** | Brigitte Tipoco Ouedraogo, SNV, touedraogo@snvworld.org, www.snvworld.org, http://tinyurl.com/nhg8f63 |

The supply of milk in Burkina Faso falls far short of demand for many reasons. A lack of feed means that cows produce little, especially in the dry season. It takes too long to deliver the milk to the processing plant, so a lot spoils. Even more is lost while waiting for processing. The milk is heated over a wood fire to kill the bacteria it contains – but the firewood has to be collected, and the processing plants lack thermometers to control the temperature. The workers did not have the equipment or knowhow to produce high-quality milk, and the plants were not well managed.

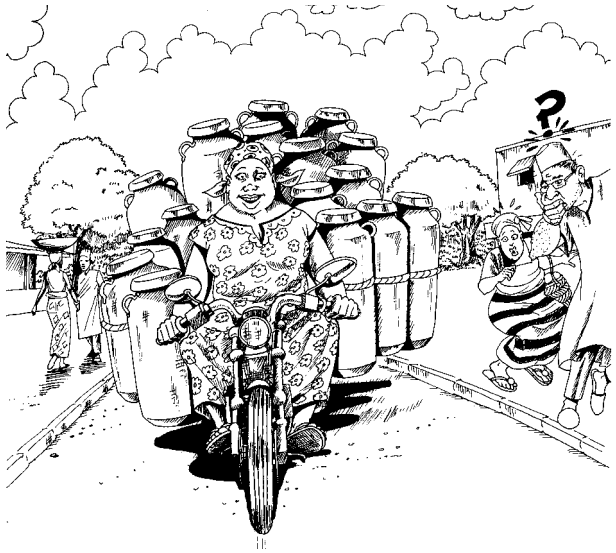
Despite these problems, Burkina Faso clearly had potential for dairying, and milk is a major source of income for livestock keepers.

### Socoprolait

In 2004, pastoralists in Tuy province, in the west of the country, formed the Société coopérative des producteurs de lait (Cooperative Society of Milk Producers, or Socoprolait) to solve these problems. This cooperative collects, processes and sells milk on behalf of its members. It persuaded the government to build a processing unit in Houndé, the provincial capital. This unit began production in November 2007. The cooperative now has 184 members, who own about 4,500 cattle. It benefits its members by collecting, processing and selling the milk they produce. But it faces a range of challenges, so in 2010 it entered into a partnership with SNV to undertake various improvements.

The partnership trained the cooperative members on feeding and care of dairy cattle so they could produce and store feed for use during the dry season, when forage is scarce. It trained the processing unit workers on improved methods and hygiene. It introduced management techniques to improve the cooperative's governance and accountability, and helped develop a business plan. It strengthened the role of women in decision-making (a woman now manages the processing unit).

*The cooperative now uses motocycles to collect milk – speeding up deliveries and improving quality.*



### Faster milk means better milk

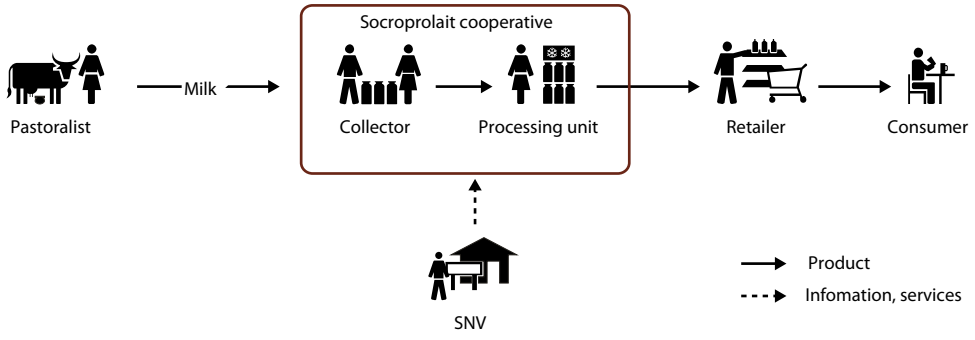
The best way to improve the quality of the milk was to reduce the time between milking and arrival at the processing plant. The cooperative now employs more people to collect milk, and they use motorbikes rather than bicycles. That has cut the delay to just 2 hours, and has made it possible to collect milk from up to 40 km away from the plant.

Everyone now observes basic rules of hygiene throughout the process of collecting, transferring and processing the milk. The raw milk is systematically tested, and a gas cooker is now used to heat the milk, removing the need for firewood. The pasteurization time has been reduced, cutting the total time needed for processing.

Milk production has gone up: a cow now produces an average of 2–4 litres per day in the rainy season and about 1 litre in the dry season. The cooperative now collects 45% more milk: a total of 37,000 litres in the 2010/11 season, compared with 24,000 litres in the previous season.

As a result, the cooperative members earned a total of €12,576 in 2010/11, up from €8,705 in 2008/9. Twelve new retailers joined the Socoprolait sales network, and the cooperative has created 14 new jobs at the processing unit.

### Marketing chain








# Case 15 Increasing the dairy potential in Say: A milk-collection centre in Niger

**Saratou Malam Goni**

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|---|---|
| **Title** | Increasing the dairy potential in Say, Niger |
| **Location** | Niger |
| **Commodity** | Cow's milk |
| **Duration** | 3 years (2010–12) |
| **Objectives** | Promote milk marketing in Say<br>Organize dairy herders and the regular collection of quality milk |
| **Beneficiaries** | Milk producers in the villages around Say |
| **Implementer** | SNV Netherlands Development Organisation |
| **Key actors** | Association des Producteurs de Lait "Hawrindé Biradam"<br>Association pour la Redynamisation de l'Élevage au Niger (AREN)<br>DGIS (donor) |
| **Cost** | €18,690 |
| **More information** | Saratou Malam Goni, SNV, smalamgoni@snvworld.org, www.snvworld.org, http://tinyurl.com/oqls4xh |

Demand for milk is high in Niamey, the capital of Niger. But the three large and several small dairies there cannot source enough milk locally. They are forced to rely on imported powdered milk instead.

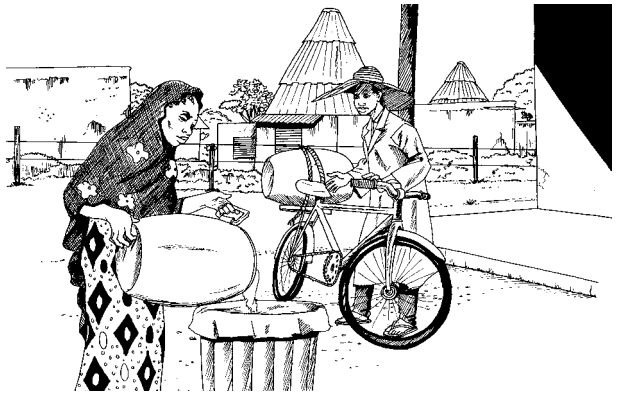
The 20 or so villages around Say, a town about 55 km from Niamey, have a good potential for milk production. Production is about 7,500 litres a day during the rainy season. But it could be a lot more.

In 2009, an Italian NGO helped a milk-producers' association called Hawrindé Biradam establish a collection centre in Say. But after the project ended, the centre had problems collecting enough milk of sufficient quality. It was collecting only 300–400 litres a day, way below its capacity of 1,600 litres. Hygiene was a problem as the producers and collectors used calabashes and other containers to hold the milk. The centre staff lacked skills, and the livestock keepers did not see milk production as a business. Women did most of the milking, but they had received little training on production and marketing.

A big livestock association, AREN, was also involved in milk production, but it did not cooperate with Hawrindé Biradam, even though some producers were members of both organizations.

### Working together

During its initial study of the situation, SNV realized that Hawrindé Biradam and AREN could both benefit from working together. It held joint workshops with the two organizations to explore the opportunities and ways to do this. It conducted a feasibility study of the collection centre, and is helping it develop a business plan. It linked the two organizations to financial institutions so they could get loans to pay for supplementary feed, veterinary services, aluminium cans, sieves and



*By working together, AREN and the collection centre have been able to improve both quality and profits.*

other basic equipment. It trained milk producers (including the women), collectors and the centre staff in milk hygiene; these in turn trained their neighbours. It supported the establishment of a feed bank where livestock keepers can buy wheat bran or groundnut cake to feed their animals during the dry season. That helps maintain milk supplies during this time. It linked the collection centre to retailers in Niamey so it could sell high-value products such as yoghurt and cheese.

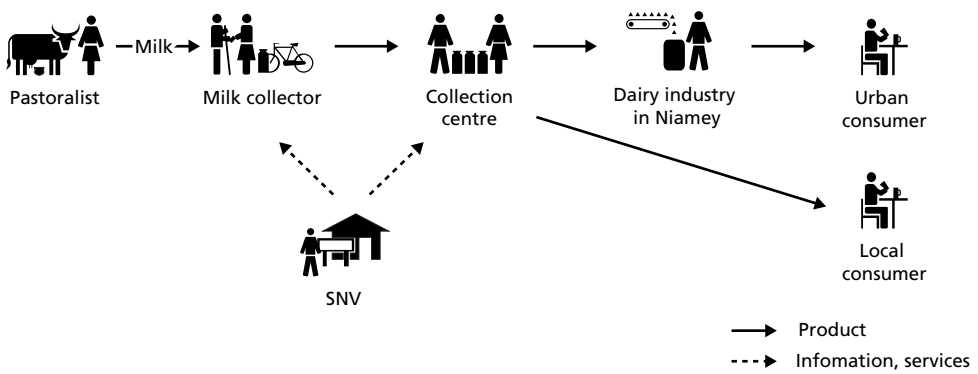
### Improved hygiene

AREN and the Hawrindé Biradam collection centre now work together: 10 collectors pick up milk each day from individual producers or groups in 12 villages. They pour the milk into a plastic container and take it to the collection centre by bicycle. This has improved the milk hygiene and quality, and profits have increased because of the higher-value products and market.

The year 2011 was difficult because of a long drought: both the cattle and their owners went hungry, and milk production did not increase. The next year, 2012 was better, and the centre more or less broke even, but people were still recovering from the drought. The collection centre expects that 2013 will be better still, and it will be able to make a profit.

It is still a challenge to get the members of Hawrindé Biradam to see the collection centre as a business. SNV is supporting a business plan to explore its opportunities and is training the staff on proper record-keeping and monitoring. A follow-up project aims to install solar power systems at the collection centre and two rural areas to power cooling and pasteurization equipment.

### Marketing chain



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# Contributors' profiles

**David Balikowa**
**Director of research, Mbarara Zonal Agricultural Research and Development Institute**
National Agricultural Research Organisation, PO Box 389 Mbarara, Uganda
Tel. +256 772 391501, +256 752 391501, email dbalikowa@gmail.com, website www.naro.go.ug

David holds a master of science in agriculture from Sokoine University of Agriculture, Tanzania, and a bachelor of veterinary medicine from Makerere University, Uganda. He has worked in the agricultural sector since 1992 in various capacities, including as a consultant for the Food and Agriculture Organization of the United Nations, as a senior business advisor for the Bill & Melinda Gates-funded East Africa Dairy Development Project, as dairy development manager with the Dairy Development Authority, as a project manager for the French-funded Agricultural Consultation and Sector Structuring Project, and as a veterinary officer with several district local governments. He is a research partner with the International Farm Comparison Network based in Kiel, Germany. He has done many consultancy assignments for international agencies.

**Isaac Bekalo Bateno**
**President, International Institute of Rural Reconstruction (IIRR)**
PO Box 66873-0800, Nairobi, Kenya
Tel. +254 020 2370039/43, email isaac.bekalo@iirr.org, website www.iirr.org

Isaac holds a PhD in organization development and planning. His over 30 years of work experience includes teaching, NGO training, curriculum design and organizational development. He has provided consultancy services on strategic planning, participatory monitoring and evaluation, project design and proposal writing. Isaac specializes in participatory development approaches and organizational development.

**Godfrey Chasama**
**Livestock researcher, Tanzania Livestock Research Institute-Mabuki**
PO Box 352 Mwanza, Tanzania
Tel. +255 754 324953, email chasamagod@yahoo.co.uk

Godfrey holds a master's degree in tropical animal production from Sokoine University of Agriculture. He specializes in animal breeding, and has experience in designing and conducting research and development projects to address various livestock-related issues, including value chain development. He has worked with government programmes and a range of donor-funded projects, including the International Development Research Centre, Sokoine University's Programme for Agricultural and Natural Resources Transformation for Improved Livelihoods, the African Institute for Capacity Development, the Association of Strengthening Agricultural Research in Eastern and Central Africa, and FARM Africa.

**Caroline Chirimi**
**Business development officer, International Institute of Rural Reconstruction (IIRR), Africa Regional Centre**
PO Box 66873, Nairobi 0800, Kenya
Tel. +254 20 2370039/43, +254 721 569369, fax +254 20 2370044, email caroline.chirimi@iirr.org, website www.iirr.org

Caroline has six years of experience in business development, brand development, project management, training and capacity building, and customer relationship management in the for-profit and humanitarian sectors. At IIRR, she oversees business-development activities in Africa. She has been involved in development, implementation and review of community-based youth programmes. She holds an honours degree in management information systems.

**Bonaventure Dakouo**
**Agriculture advisor, SNV**
Rue 17 Porte 305 Badalabougou Est, BP 2220
Bamako 2220, Mali
Tel. +223 33 33 47, +223 33 33 48, fax +223 223 10 84, email bdakouo@snvworld.org, www.snvmali.org

Bonaventure holds a degree in livestock sciences from the Rural Polytechnic of Katibougou in Mali. He manages projects with local and women's organizations to increase their members' income and to help cooperatives decentralize. He has experience in natural resource management, capacity building of pastoralists and agropastoralists and the provision of services to livestock organizations.

**Abdurehman Eid**
**Programme coordinator/researcher, Horn of Africa Voluntary Youth Committee and Jigjiga University**
Jigjiga, Ethiopia
Tel. +251 9 157 44967, email abdurez4000@yahoo.com

Abdurehman is a pastoral development consultant based in the Somali Region of Ethiopia. He holds a master's degree in agricultural economics. He has provided various research and consultancy services in Somali pastoral areas of Ethiopia. He is currently working as a programme coordinator with a regional NGO, as well as with Jigjiga University as a researcher. He also offers consultancy services to national and international organizations on various aspects of pastoralism.

**Binyam Kassa Engidasew**
**Researcher, dairy science and technology, Ethiopian Institute of Agricultural Research**
Addis Ababa 29125, Ethiopia
Tel. +251 911 863173, +251 911 942355, email binyam.kassa@gmail.com, binyam.kassa@ymail.com, website www.eiar.gov.et

Binyam works at the Ethiopian Institute of Agricultural Research's Holeta Centre. He holds a master's degree in dairy science and technology from Hawassa University in Ethiopia. He conducts research on dairy postharvest techniques and provides consultancy services on dairy farming, processing and value chain development. He has given a number of training courses and performed consultancies for dairy farmers, cooperatives and milk processors in Ethiopia.

**Albert Yatondé Houedassou**
**Advisor, livestock/pastoralism, SNV Benin**
BP 235, Parakou, Benin
Tel. +229 95 18 98 11, +229 97 18 42 40, email ahouedassou@snvworld.org, website www.snvworg.org

Albert is a rural economic development advisor with expertise in agricultural value chain development. He has eight years of experience in technical and institutional support to livestock organizations, and has advised more than 20 farmers' organizations in economic development, animal health, access to feed, secure grazing land, conflict management and livestock market management. He has worked with several partner networks in Niger, Burkina Faso, Mali and Benin in livestock development. He holds a master's degree in organizational management.

**James Kariithi**
**Agribusiness officer, Ministry of Livestock Development**
PO Box 34188-GPO, Nairobi, Kenya
Tel. +254722377150, email jameskariithi06@yahoo.com

James holds a master's degree in entrepreneurship and a bachelor's in agriculture from Kenya Methodist University, a diploma in ranch management from Egerton University, an international diploma in poultry husbandry from PTC+ (a training organization located in the Netherlands) and a certificate in meat processing from Beijing Meat Research Centre in China. He provides training in agribusiness development and entrepreneurship for livestock stakeholders, and trains farming communities on value chains and helps them develop business plans.

**Rose Kipyego**
**Knowledge, documentation and communication officer, International Institute of Rural Reconstruction (IIRR)**
PO Box 66873 Westlands, Nairobi 00800, Kenya
Tel. +254 20 2370039, +254 20 2370041, fax +254 20 4448148, email rose.kipyego@iirr.org, website www.iirr.org





Rose holds a postgraduate diploma in mass communication, a bachelor of arts degree in linguistics and literary studies, and a certificate in editing skills. She has nine years of editing experience in both educational and literary materials. She has skills in radio and video production and editing, photojournalism and writing for the media. Before joining IIRR, Rose worked for the Jomo Kenyatta Foundation, a book publisher.

**Reuben Koech**
**Monitoring and evaluation coordinator, Heifer International-Kenya**
PO Box 76478, Nairobi 00508, Kenya
Tel. +254 722 390909, +254 722 200406, fax +254 20 3871692/3, email kiprkoech@yahoo.com, reuben.koech@heiferkenya.org, reuben.koech@heifer.org, website www.heifer.org

Reuben is an animal scientist with a master's degree in veterinary epidemiology and economics from the University of Nairobi, Kenya. He has over 12 years in development practice in Kenya. Lately he has specialized in planning, monitoring and evaluation. At Heifer Kenya, he evaluates and reviews projects, writes reports and case studies, and develops training materials. He is an experienced trainer for development practitioners and farmers.

**Mary Ann Llanza**
**Programme specialist, development communications, International Institute of Rural Reconstruction (IIRR)**
Silang, Cavite 4118, Philippines
Tel. +63 46 4143216, mobile +63 9155894790, email maeanne.llanza@iirr.org, website www.iirr.org

Mae-anne, as she is called in her home country, the Philippines, is IIRR's programme specialist for development communications at its Regional Center for Asia. She has over 20 years of work experience, mainly with NGOs doing communications, publications, training, research, and project management. Her work experience has covered a wide range of issues, including disaster management, financial cooperatives, land administration and management, and gender issues. She has worked with the Asia Pacific Forum on Women, Law and Development, an organization based in Chiang Mai, Thailand, that works on women's issues such as labour and migration, political participation, violence against women and the environment. Before joining IIRR in 2011, she was with the Asia Pacific Alliance for Sexual and Reproductive Health and Rights in Bangkok. She is a graduate of mass communications, majoring in journalism at the University of the Philippines Baguio, and has studied creative writing at the University of the Philippines Diliman.

**Anthony Kimotho Macharia**
**Principal consultant, Consortium Services**
PO Box AD 29 ADD, Gaborone, Botswana
Tel. +267 0 71379883, fax +267 0 3912659, email machariak@gmail.com

A Kenyan citizen, Anthony is an independent consultant based in Botswana. He holds a master's degree in agricultural economics and econometrics from the University of Botswana, and a BSc in agricultural economics from Egerton University in Kenya. He is currently pursuing a PhD in economics with Rhodes University, South Africa. He specializes in research and agricultural management consultancies. He has extensive experience in agricultural project development, monitoring and evaluation, and the design and implementation of household-surveys for impact studies in agriculture, health, labour, services, consumer surveys and poverty-related issues. He has consulted with various organizations including the United Nations Development Programme, the World Bank and the governments of Kenya, Mozambique, Lesotho, Ethiopia and Botswana

**Eric McGaw**
**Director of communications, International Institute of Rural Reconstruction (IIRR)**
YC James Yen Center, Silang, Cavite 4118, Philippines
Tel: (63-46) 414-3216, +233 544337969, +254 702240205, email eric.mcgaw@iirr.org, website www.iirr.org

Eric is an American citizen with over 40 years of experience in the developing world. He is a communications professional who has worked extensively in Latin America, Asia, the Middle East and Africa. His longest assignments have been in El Salvador, Colombia, Brunei, the Philippines, India, Dubai, Kenya and Ghana. While in India, he founded a proprietary company specializing in communication skills training and event management.

### Saratou Malam Goni

**Livestock/pastoralism advisor, SNV**
Avenue des Zamakoye, BP 10110, Niamey, Niger
Tel. +227 20 75 36 33, +227 94 27 37 10, fax +227 20 75 35 06, email smalamgoni@snvworld.org, website www.snvworld.org

Saratou has eight years of advisory experience supporting farmers' organizations in agriculture with a focus on business development and the dairy industry. She is a microfinance specialist with expertise in setting up microfinance organizations and monitoring their management of savings and loans. She has held senior positions in this field in the last 14 years including as a project manager, advisor and trainer. Saratou is also trained in good governance, participation, gender mainstreaming, coaching and networking.

### Evelyn Mathias

**Consultant, livestock production and indigenous knowledge, TradiNova Livestock**
Müllenberg 5a, Kürten 51515, Germany
Tel. +49 2268 801691, email evelyn@mamud.com, website www.mamud.com, www.eldev.net

Evelyn is a German veterinarian with a doctorate from the University of Giessen in Germany, an MS in international development from Iowa State University, and a board certification in tropical veterinary medicine. She has some 30 years of experience in international development and has worked in 26 countries, focusing on ecologically responsible livestock production, ethnoveterinary medicine and indigenous knowledge. In 1997, she joined the League for Pastoral Peoples and Endogenous Livestock Development and was its treasurer and network coordinator from 2001 to 2011. More recently she co-founded the consulting initiative TradiNova Livestock and now focuses on research and the promotion of sustainable and affordable animal healthcare and production.

### Abdikadir Mohamed

**Programme officer, Kenya Livestock Marketing Council**
Box 2696, Nairobi 0200, Kenya
Tel. +254 20 317182, +254 703 278022, email livestockcouncil@gmail.com, website www.livestockcouncil.or.ke

Abdikadir has been in NGO world for 21 years. He has worked in various capacities in different organizations. A teacher by profession, he holds a BA in education. His areas of expertise are capacity building and institutional development.

### Paul Mundy

**Independent consultant in development communication**
Müllenberg 5a, 51515 Kürten, Germany
Tel. +49 2268 801691, email paul@mamud.com, website www.mamud.com

Paul is a British consultant in development communication. He holds a PhD in journalism and mass communications from the University of Wisconsin-Madison. He specializes in easy-to-understand extension materials, developed through intensive writeshops like the one used to produce this book. He also provides consultancy services in various aspects of development communication. He has worked extensively in Africa, Southeast Asia, South Asia, Latin America and the Caribbean.

### Eric Mwaura

**Regional manager, food security and wealth creation, International Institute of Rural Reconstruction (IIRR)**
PO Box 66873, Westlands, Nairobi 00800, Kenya
Tel. +254 20 4440991, +254 20 4442610, fax +254 20 4448148, email eric.mwaura@iirr.org, website www.iirr.org

Eric has a BSc and MSc in agriculture. He has over 15 years' experience in implementation and management of community development projects on food and livelihood security in eastern Africa. He has practical experience and knowledge in pro-poor value chain facilitation and training. Before joining IIRR, he worked with the SEEP Network's Academic Model Providing Access to Healthcare, and Africa Now as the regional value chain manager. He has also worked with the Kenya Flower Council, the Kenya Institute of Organic Farming, and the Green Belt Movement.





### Sylvester Nyadero

**General manager, Turkana Meat Processors Co. Ltd/Lomidat Slaughterhouse**
PO Box 52, Lokichoggio 30503, Kenya
Tel. +254 722 47 08 69, +254 712 48 06 36, email nyadero@gmail.com, website www.lomidatmeat.co.ke

Sylvester holds a degree in food science and technology from the University of Nairobi, and is pursuing his master's degree in project planning and management in the same university. He is a certified internal auditor in food safety management systems. He has served as a production superintendent with the Kenya Meat Commission, and accounts and administration officer in Raisons Trading Co Ltd. He has provided consultancies on technical operations and environmental due diligence for Kenya Meat and has developed training modules on abattoir operation and management in Somaliland for Terra Nuova East Africa.

### Janet Nyaoro

**Regional manager – Applied Leraning Programme, International Institute of Rural Reconstruction (IIRR)**
PO Box 66873-0800, Nairobi, Kenya
Tel. +254 020 2370039/43, email janet.nyaoro@iirr.org, website www.iirr.org

Janet is a capacity development specialist with over 13 years of experience in training in the for-profit and humanitarian sectors. At IIRR she is in charge of the Applied Learning Programme, which provides training, technical assistance and documentation support through the writeshop process. She also trains and facilitates in IIRR's thematic programmes including disaster risk reduction, value chain development and other cross-cutting themes such as monitoring and evaluation. She holds a BEd degree in economics and geography, and a post-graduate degree in human resource management. She is currently writing her thesis for an MA in development communication.

### Bonaventure Nyotumba

**Artist/graphic designer, Skyward Design and Marketing Ltd.**
PO Box 68308, Nairobi 00610, Kenya
Tel. +254 723 66 77 88, +254 20 31 69 12, email nyotsz@yahoo.com, info@skywardkenya.com

Bonaventure has worked as an illustrator and desktop publishing specialist for various organizations in Kenya, Tanzania, Ethiopia, Zambia and India. His clients have included the International Institute of Rural Reconstruction, Catholic Relief Services' Great Lakes Cassava Initiative, the International Centre of Insect Physiology and Ecology, CARE Kenya and Somalia, Oxfam GB, the Regional Land Management Unit (RELMA in ICRAF), the Japan International Cooperation Agency, ACT, GTZ-Sustainet, the Food and Agriculture Organization of the United Nations, and NCA South Sudan.

### Alfred Ombati

**Artist/graphic designer**
PO Box 64427, Nairobi 00600, Kenya
Tel +254 723 350628, 721 420806, email aholiabsart@yahoo.com

Alfred is a freelance artist who has been involved in publication projects with various NGOs, including the International Institute of Rural Reconstruction, Medicins Sans Frontières and the African Technology Policy Studies Network. He has also worked with publishing companies including Cover Concepts, Oxford University Press, Sahel Book Publishing, and the Ministry of Education, as well as with advertising agencies such as Lowe Scanad, McCann Erickson and Quite Bright Films. He also paints fine arts and murals.

### Tipoco Brigitte Ouedraogo

**Advisor livestock/pastoralism, SNV Burkina Faso**
01 BP 1206, Bobo Dioulasso, Burkina Faso
Tel. +226 77 29 16 79, +226 70 27 64 95, email touedraogo@snvworld.org, website www.snvworg.org

Tipoco holds a degree in rural development from Ouagadougou university, and a master's in continental, arid, Mediterranean and mountain ecosystems management from the Faculty of Sciences at Saint Jérôme, Marseilles. She has been working for over 20 years in livestock breeding and products in Burkina Faso. She specializes in training and coaching various people in the livestock value chain, managing projects and reporting.

## Emma Proud

**Economic and market development advisor, Mercy Corps**

c/o Mercy Corps, 43 SW Ankeny Street, Portland, Oregon 97204, United States
Tel. +44 (0)20 3239 7720, email eproud@hq.mercycorps.org, website www.mercycorps.org


Emma provides support to field teams to guide strategy and improve programming in economic and market development. She leads the design, development and evaluation of programmes, integrating best practice and documenting learning. She trains senior leadership, field and headquarter teams in the "making markets work for the poor" approach, and leads efforts to develop Mercy Corps' market driven strategy in pastoral areas. Previously, she spent four years in Ethiopia managing market development and livelihoods programmes in pastoral and agropastoral areas. Before this, she worked for seven years in the private sector.


## Jeremiah Joseph Temu

**Principal livestock officer, Tanzania Meat Board**

PO Box 6085, Dar es Salaam, Tanzania
Tel. +255 784 446 229, +255 719 090 561, fax +255 22 2861908, email jeremiahtemu@yahoo.com, website www.mifugo.go.tz


Jeremiah works with the Ministry of Livestock and Fisheries Development, dealing with issues related to livestock, meat and meat products processing and marketing. He holds an MBA in marketing from the University of Dar es Salaam. Currently, he is working with Tanzania Meat Board secretariat on a temporary basis for the implementation of the Meat Industry Act of 2006, which aims at restructuring the country's meat industry, establishing a proper basis for its efficient management, and ensuring the provision of high-quality meat products. Also, together with the United Nations Industrial Development Organization and local government authorities, he is involved in the implementation of the red meat value chain in the Mbeya and Iringa regions. He is also a member of the livestock working group for the Southern Agricultural Development Growth Corridor.


## Joshua Waiswa

**Deputy chief executive officer, Uganda Meat Producers Cooperative Union Ltd**

Kampala, Uganda
Tel. +256 779 342175, +256 704 581118, email nabangijoshua@gmail.com


Joshua holds a master's degree in public health from Makerere University, a postgraduate diploma in project planning and management from Uganda Management Institute, and a bachelor's in veterinary medicine. While he specializes in animal breeding and disease control, he has a wide range of experience in cooperative governance, the implementation of sanitary and phytosanitary measures, and the management of livestock development projects to reduce poverty. He has worked extensively in rural Uganda with projects and organizations such as Stamping Out Sleeping Sickness, BRAC Uganda, and the Uganda Meat Export Development Programme.