Community protocols
for pastoralists and livestock keepers

Claiming rights under the Convention on Biological Diversity

League for Pastoral Peoples and Endogenous Livestock Development (LPP)

and the **Local Livestock for Empowerment (LIFE) Network**

LEAGUE FOR PASTORAL PEOPLES AND ENDOGENOUS LIVESTOCK DEVELOPMENT

LIFE Network

MISEREOR IHR HILFSWERK

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Preface

Rajasthan, a desert state in western India, has always prided itself on its camels. Among its many tourist attractions is the annual Pushkar Fair, the world's largest camel market, where more than 50,000 camels and their herders are said to congregate.

But since the 1990s, the camel population has plummeted. Camel breeders, who belong to the Raika caste, blame this on various causes: the disappearance of grazing, the spread of diseases, and the declining demand for camels. Unable to sell young males at Pushkar and other markets, many herders ave given up camel-keeping entirely.

The state government learned of this around 2013. Concerned about the declining population of camels, it declared the camel the state animal of Rajasthan in 2014. And in 2015 it passed a law prohibiting the slaughter of camels and their export from Rajasthan, thinking that this would protect the remaining camel population.

But when passing these laws, the government never once gave a thought to the people who had been looking after the camel for so long. Nor did it attempt to listen to them and understand their perspective.

The result has been a disaster for the camels and the Raika. Unable to sell animals and shorn of their source of income, ever more herders have disposed of their herds. Stray, neglected, hungry camels are now commonplace along Rajasthan's roadsides.

But at the same time, new opportunities were opening up. Camel milk was developing a reputation as a "superfood", and research found that it has health-enhancing effects. Raika camel breeders were excited but did not know how they might benefit. Dispersed in remote areas and far from markets, they did not have the resources to get their milk to urban consumers.

Lokhit Pashu-Palak Sansthan (LPPS), an NGO that had worked with the Raika for many years, motivated them to write a **biocultural community protocol** (Raika Samaj Panchayat 2009). This document states that they were guardians of the camel and creators of the various types of camels that exist in Rajasthan. It explains how they breed and manage camels in harmony with local biodiversity. It claims the Raika's status as an indigenous and local community that stewards biological diversity and has an extensive body of knowledge and customary practices necessary to maintain this biodiversity. The document describes the problems that hinder the herders' stewardship and suggests interventions that would overcome these. It refers to international, national and state laws supporting their case: the Convention on Biological Diversity, the Nagoya Protocol on Access and Benefit Sharing, and Indian law.

LPPS and the Raika then organized a special event with high-level supporters to submit their community protocol to the state government (LPPS 2017, Marwar Camel Culture Festival 2017).

What happened next? Within a couple of months, the Government of Rajasthan allocated INR 50 million (about USD 750,000) to establish a camel dairy. It has also indicated its willingness to explore setting up a "camel policy". The community protocol will go into the official record giving the Raika legal backing. Policymakers will never be able to say that they did not know about the Raika or their concerns.

Community protocols are both a legal instrument for declaring a community's status and its claims to a livestock breed or management system, and a means to help the community to organize and assert its rights. Community leaders, nongovernment organizations and researchers can help livestock-keeping communities develop protocols to assert their claims, and can then help them use these documents to lobby for policy changes.

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1 Introduction

Over thousands of years, livestock keepers have created thousands of livestock breeds – each one uniquely adapted to the local environment and their owners' needs. This is particularly true of pastoralists: herders who move from place to place with their animals to graze seasonal natural vegetation or crop residues (Krätli 2015).

In some ways, pastoralists' breeds are specialists: they thrive in places that are too hot, cold, dry or steep for less hardy types. They do not require the special feed, housing and pampering that modern breeds demand. In other ways they are generalists: unlike single-purpose modern breeds, they produce meat, milk, wool, hides and offspring, pull ploughs and carts, carry loads, and act as a store of wealth and a glue that holds communities together.

In managing their animals, pastoralists also perform a valuable service for humanity: they are maintaining biodiversity and animal genetic resources. The genes that confer hardiness, disease resistance or drought tolerance may one day be useful for animal breeders who need to incorporate these traits into other breeds. Essentially, pastoralists and other keepers of local breeds are doing what a network of global seed banks are doing for plants: they are conserving animal genetic resources for an uncertain future filled with conflict, natural disasters and climate change.

Pastoralists are the creators and managers of their animal breeds

And they are doing so for free. A network of plant and animal genebanks around the world conserves seeds, animal semen and other reproductive material either deep frozen or cryoconserved in liquid nitrogen. Maintaining such vaults is vital – but it is very expensive. Pastoralists, on the other hand, maintain their animals for free, and in doing so produce a range of products and services, maintain food security and support the local economy.

It is time that this important service by pastoralists receives widespread recognition, is rewarded adequately, and that they receive some benefits from their vital contribution to conservation.

It is also time to recognize that pastoralists perform a remarkable feat: they produce food without tilling the soil, without replacing wild plants with crop monocultures, and without chemical fertilizers and pesticides. They simply convert whatever biomass is available – be it wild flora or crop residues – into high-value protein. Their presence is unfailingly correlated with very biodiverse ecosystems. Resembling a combine harvester, their herds harvest this biodiversity, but unlike a combine harvester they process it immediately and do not require fossil fuels to operate.

Community protocols (also often referred to as **biocultural community protocols**, or **BCPs**) are a tool that can help change perceptions about pastoralists and protect their interests. A community protocol is a description, created by the community of livestock keepers themselves, that describes their biodiverse livestock production system, including the breed and the traditional knowledge they use to manage it. Local communities, and those that support them, can use community protocols to support their interests and defend their way of life. A community protocol describes an animal breed not scientifically, but in the words and from the perspective of its creators and keepers. It puts on record the relationship between the community, the breed, and the environment in which they live. It describes how the people manage their animals, and states the community's claim to the breed.

Community protocols were conceived in the **Nagoya Protocol on Access and Benefit Sharing** (see Chapter 3) as **legal** documents – to gain recognition of the services that livestock keepers provide by conserving biodiversity. They articulate the community's claims as creators and managers of livestock breeds in the context of the agro-ecosystem in which they were developed.

But they also have many **other uses**. They tell the outside world about the breed and the community's links to it. They document the community's knowledge at a time that it is in danger of being forgotten. And perhaps most important, they raise the awareness in the community itself about their breed and its importance to their way of life. The process of preparing a community protocol can help the community organize around a cause, and once completed, they can use the document to lobby for support and policy changes.

Every livestock-keeping community with a close relationship with a particular breed should document its claims to the breed through a community protocol. That includes pastoralists (the focus of this manual), livestock keepers on islands or in remote or mountainous areas, and other groups that maintain distinctive breeds.

This manual describes how to create a community protocol. It is divided into three parts, each with several chapters.

Part 1: What are community protocols? This explains what community protocols are and why communities (and their supporters) should produce them.

- **Chapter 2, Local breeds, biodiversity and pastoralism**, gives a brief background of local breeds and animal genetic diversity.
- **Chapter 3, Community protocols**, describes what community protocols are and why they are useful.
- **Chapter 4, Access and benefit-sharing**, describes the ideas of access to genetic resources and the sharing of benefits derived from them.
- **Chapter 5, Community protocols and the law**, explains the legal background to community protocols.

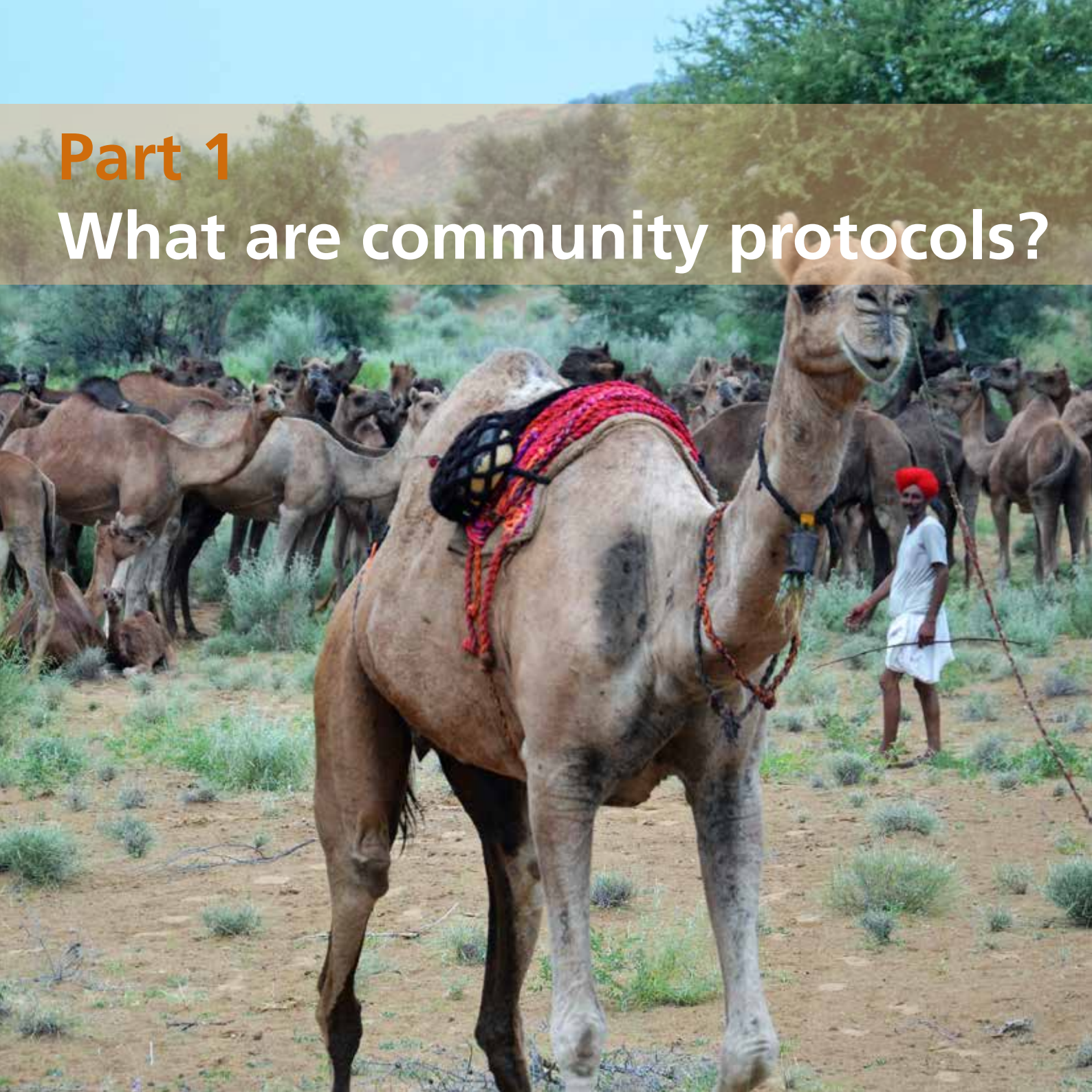
Part 2: Producing a community protocol. This explains how you can go about producing a community protocol.

- **Chapter 6. Who produces community protocols?** discusses who should produce a community protocol.
- **Chapter 7, How to compile a community protocol**, lists the steps to producing a community protocol.
- **Chapter 8, Gathering information, analysing and writing**, focuses on two of these steps: the information-gathering and writing stages.
- **Chapter 9, Contents of a community protocol**, indicates the contents of a typical community protocol.
- **Chapter 10, Using a community protocol**, describes how to use a community protocol.

Part 3: Resources. This gives some examples of existing community protocols, as well as resources to refer to when producing a new protocol.

- **Chapter 11, Examples of community protocols**, describes some of the community protocols that have been produced so far by pastoralist groups around the world.
- **Chapter 12, International agreements and policies**, lists the international agreements and policies that you can cite in a community protocol.
- **Chapter 13, Organizations**, gives a list of organizations involved in community protocols and related aspects of livestock development.
- **Chapter 14, Bibliography**, gives references related to community protocols.
- **Chapter 15, Contributors**, has short biographies and contact details of the people who contributed to this book.

Part 1
What are community protocols?



2 Local breeds, biodiversity and pastoralism

Ankole longhorn cattle are a unique breed native to Uganda

Compare animals from any two local breeds of the same species, and they will look very different: the first breed may be big and have horns and a brown coat; an animal from another breed may be smaller, hornless and have a spotted hide. The differences go beyond the outward appearance: one breed may be good at walking long distances and going without water for long periods, while another may suffer more from thirst but be better at tolerating diseases.

These differences are the result of careful breeding by livestock keepers over hundreds of years. Each breed is ideally adapted to its local conditions: the weather and climate, soils and vegetation, pests and diseases. It is also adapted to the management systems that the livestock keepers use – housing, feeding, grazing, watering and mobility – and to the products and services they require: meat, milk, eggs, wool, hides and traction.

Nevertheless, defining a breed is surprisingly difficult (Box 1).

Pastoralists create breeds

Pastoralists are livestock specialists. They have been responsible for developing many local breeds. Often the names of the breed, the location and the pastoralist group are the same – Samburu cattle, Maasai sheep, Somali goats, Arab horses,

Gaddi sheep – showing the close identification of the herders with their animals and the landscape in which they live. Because they rely so much on their animals, pastoralists have paid special attention to their breeding: they select animals that are hardy, suitable for trekking, and continue producing milk despite a lack of fodder and water. They have a keen eye for animals of other breeds they can use to cross and improve their current herds. Just as modern livestock breeders determine the characteristics of their animals, herders have also shaped their breeds to suit their preferences and needs.

Livestock keepers who live on islands or in remote or mountainous areas face similar constraints. Their breeds have often evolved in relative isolation, so have developed distinctive features. Examples are Shetland sheep, Bali cattle, and Qinghai yaks.

Threats to biodiversity

The diversity among breeds reflects their underlying genetic diversity. Each breed contains a distinctive set of genes that govern the animal's appearance and traits. These genes are potentially extremely valuable. The external conditions are changing rapidly: the climate, environment, production systems and markets are all in a state of flux. Genes for hardiness, or disease resistance may prove vital to enabling other breeds to adapt to these changing circumstances.

But just when it is becoming more important than ever, livestock diversity is under threat. Many local breeds are being replaced by a small number of high-yielding breeds that produce enormous amounts of a single product, such as meat or milk. Local multipurpose cattle breeds are being replaced by the ubiquitous black-and-white Holstein-Friesian dairy animals. Commercial hybrids, Large Whites and Durocs are crowding out local pig breeds; hybrids are replacing local chickens. In the hope of raising production and guided by so-called "experts", many livestock keepers are crossing their traditional breeds with imported exotic animals. For many breeds, it is becoming difficult to find any purebred animals.

Box 1 Is it a breed?

The Food and Agriculture Organization of the United Nations (FAO) considers a breed is to be either:

- A subspecific group of domestic livestock with definable and identifiable external characteristics that enable it to be separated by visual appraisal from other similarly defined groups within the same species

and/or:

- A group for which geographical and/or cultural separation from phenotypically similar groups has led to acceptance of its separate identity.

The following questions can help you decide whether a population of animals represents a breed:

- Are there any breeding institutions, such as a communally kept bull? How are male breeding animals distributed, by whom are they owned?
- Are most animals born into the herd, or are livestock keepers buying new animals? If the latter is the case, then the research area is not a breeding area and a distinct breed may not be present.
- Are there social regulations about the exchange of animals?
- What is the social meaning of the animals?
- Is there a myth of origin for the breed or species?
- If all or most of these answers can be answered with Yes, then it is likely that a distinct breed is present.

Source: LPPS and Ilse Köhler-Rollefson (2005), FAO (2007b p.339)

Table 1 Comparison of livestock systems between locally adapted and high-performance breeds

High-performance breeds	Local breeds
Specialized, provide only one product	Multipurpose, provide wide range of products
Require high feed input, including green fodder and concentrates	Subsist on natural vegetation
Require expensive housing and stabilized climate	No, or only minimal, protection
Susceptible to diseases	Disease-resistant
Need high level of care and time	Need little care
If kept in landless system, negative effects on the environment through the accumulation of waste	Positive ecological effects by being integrated into the farm cycle contributing manure and sometimes draft power
Often compete with humans for grain	Utilize vegetation and areas that often cannot be exploited otherwise
Adoption requires large amount of capital	Traditional occupation inherited by forefathers
Lead to wealth differentials and offer benefits for only a few	Kept in social contexts which maintain sharing mechanisms

Source: LPPS (1995)

But high-yielding breeds require a lot of pampering: special feed, veterinary care and housing (Table 1). And they are built on a very narrow genetic base: through artificial insemination, a single breeding male can father hundreds of thousands of offspring; embryo transfer techniques allow a single female to produce dozens of offspring. Such a limited genetic base represents a major risk: a new disease can spread rapidly throughout a population and decimate food production.

Through its Domestic Animal Diversity Information System (DAD-IS), the Food and Agricultural Organization of the United Nations (FAO) keeps track of the number of livestock breeds worldwide. It currently has records of around 8,800 recognized breeds of 38 livestock species. Of these, some 643 (7%) are already extinct, and 17% are classified as "at risk". But there is not enough information for the majority of breeds (58%), so it is impossible to tell whether they are thriving or at risk of extinction.

FAO and national databanks describe breeds in terms of their physical characteristics (their "phenotypical traits"), such as colour patterns, withers height, shape and site of ears, and length of the tail. Emphasizing such external characteristics cre-

ates the impression that breeds are biological resources, assemblages of genes. But nothing could be further from the truth: all livestock breeds are the product of active human intervention – they have been created by people. Breeds are products of both biology and culture – they are biocultural entities.

Maintaining landscapes

Biodiversity is not only about livestock diversity, it is also very much about plant biodiversity. Crop farming represents a radical simplification of the ecosystem: turning a forest or meadow into a crop field means replacing hundreds of different types of plants with just a single species. The field's original inhabitants are relegated to its boundaries – or are regarded as weeds to be eliminated.

Pastoralism, on the other hand, maintains plant diversity. The animals graze on vegetation but do not destroy it, allowing new shoots to grow. They transport seeds from place to place in their hides. They trample seeds into the soil, allowing them to germinate. Their dung fertilizes the soil and adds to the humus layer.

Pastoralists are careful to maintain their environment: they maintain large herds for economic and social reasons, but move them from place to place to avoid overgrazing a particular area, allowing the pasture to recover. Complex customary laws govern who can use which areas. Many groups maintain grazing reserves for emergencies such as drought. But an array of developments is restricting the pastoralists' traditional movements: population growth, conflict, poorly sited water points, the conversion of the best land into cropland, fencing, urban growth and the creation of nature reserves. These factors constrain movements and force the pastoralists into smaller, more remote and less favourable areas, often leading to conflict with sedentary people or the abandonment of pastoralism.

Community protocols offer a solution. They state the claim of the livestock-keeping group not just to a particular breed, but also to their customary resources and landscape. In areas where rights to land and water are not legally registered, it is important to put on record that a particular group has traditionally used the natural resources. This can provide evidence that may be vital for maintaining such customary rights in the future.

Box 2 Why protect local breeds?

Much of the world's animal genetic resources diversity is held by small-scale, often poor, livestock keepers (FAO 2009a). The future of this diversity will depend on livestock keepers being both able and motivated to continue raising traditional breeds.

Traditional breeds will retain their adaptive traits only for as long as they are kept in their original production environment, i.e., conserved *in situ* (Sponenberg and Bixby 2007, Van der Werf et al. 2009).

Wide access to genetic resources and equitable frameworks for benefit sharing are a prerequisite for sustainable use of livestock biodiversity, its further development and continued availability for the generations to come (Hiemstra and Ivankovic 2010).

There is a need to provide incentives to livestock keepers who keep local and indigenous breeds (Hiemstra and Ivankovic 2010, Tvedt et al. 2007).

Local livestock keepers have no means of protecting their resources while commercial actors guard their innovations through patents, trade secrets and commercial contracts prohibiting use for breeding (Köhler-Rollefson 2010a)

Not just the developing world

Community protocols are not only for developing countries. Livestock-keeping communities that raise traditional breeds exist in the developed world too: such as shepherds, cattle-raisers and reindeer-herders in Europe. These groups often face the same types of problems as their equivalents in developing countries.

3 Community protocols

A COMMUNITY PROTOCOL (or "biocultural community protocol" or "biocultural protocol") is a statement by a community about the biological diversity it has created and is stewarding, about the traditional knowledge it uses to manage this biodiversity, and its role in biodiversity conservation.

A community may prepare protocols on a wide range of topics: for example, its stewardship of a particular area or landscape, a particular plant type (such as a medicinal plant), its traditional knowledge, or its customary forms of organization.

This manual focuses on community protocols for livestock systems. For a guide on producing community protocols on other topics, see Makagon (2016).

A Raika herder (left) and a Kachchhi camel breeder work on a community protocol

What is in a community protocol?

Because community protocols are produced by communities themselves and cover a wide range of topics, they may vary considerably. For livestock, they generally consist of the following sections (Figure 1).

1. **Introduction.** Who the community is and the purpose of the community protocol.

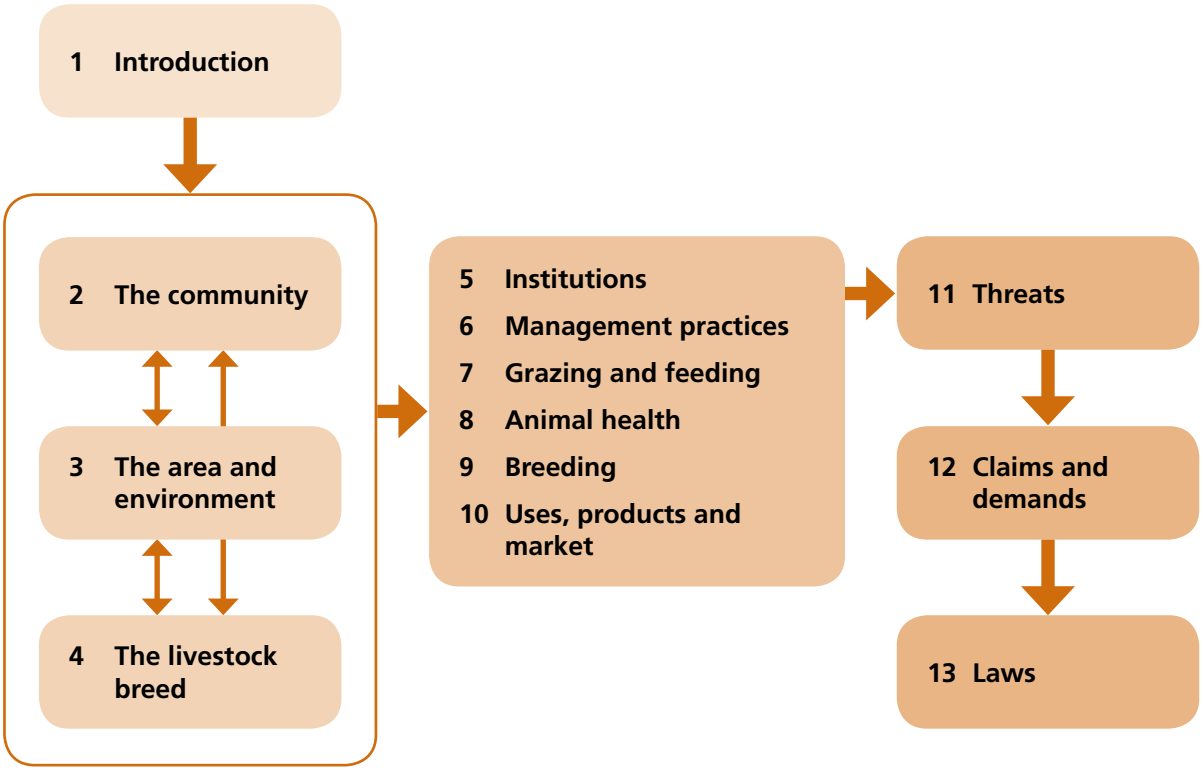


Figure 1. The parts of a community protocol for livestock

2. **The community.** A self-definition of the community, its characteristics, how it is organized, its leadership and decision-making processes.

3. **The area.** A description of the area and environment where the community lives, the local resources and the community's relationship with them.

4. **The breed.** A description of the livestock species and breed that the community lays claim to. This covers the history of the breed (including any myths and beliefs of how it originated), the physical characteristics of the animals, their numbers and distribution, and their behaviour, and their relationship to the environment.

Section 5 to 10 cover the relationship between the community and the breed.

5. **Institutions.** The beliefs and rituals involving the animals, and related community institutions and conservation efforts.

6. **Management practices.** The management system, herd composition, seasonal movements, daily schedule, housing and equipment, and the division of labour in managing the animals.

7. **Grazing and feeding.** The grazing and feeding system, forage types, integration with crop cultivation, fodder provision and watering practices.

8. **Animal health.** (optional) The traditional knowledge about how to maintain the animals' health and treat diseases: the medicinal plants used, and the traditional healers who use them.

9. **Breeding.** How the livestock keepers manage breeding, keep records, and select desirable males and females for breeding.

10. **Uses, products and markets.** The products and services that the animals provide, their special characteristics, and how they are marketed.

11. **Threats and opportunities.** A description of relevant threats to the community, the breed, the production system and the area in which they live, as well as the opportunities that are open.

12. **Claims and demands.** The claims and demands that the community wishes to assert over the breed, the area, or the associated traditional knowledge. The actions the community requests to be able to continue stewarding the breed.

13. **Laws.** A list of the legal foundations of the claims.

The order, length and content of the sections may vary. For example, one community protocol may put emphasis on the landscape in which the community lives (so section 3 will be longer). Some communities keep several different types of animals (for example, cattle, sheep and camels). A community protocol may cover all of them. If so, it should contain separate sections for each livestock type and the community's relationships with it.

See Chapter 9 for details of what a community protocol contains.

Table 2 Difference between a community protocol and a breed descriptor

	Breed descriptor	Community protocol
What is documented	A breed	A biodiverse production system, including people, culture, livestock and environment
Focus on	Physical and production characteristics	Traditional knowledge about breeding and biological diversity of feed, forage and medicinal plants
Type of documentation	Measurements of body parts and production outputs, usually under controlled (research institute or government farm) conditions	Perceptions about special characteristics of the breed, its value compared to other breeds, folklore, local stories
Who documents?	Scientist, geneticist	Community, possibly facilitated by NGO
Purpose	To obtain scientific description and record of a country's animal genetic resources	To claim community ownership over a breed, and identify and put on record the pressures on a breed and the prerequisites for its conservation and continued sustainable use
Relevant to Access and Benefit-Sharing	No	Yes
Description of threats and opportunities	No	Yes
Information about conservation needs	No	Yes

A brief history

The 1992 United Nations Convention on Biological Diversity aims to conserve and sustainably use biodiversity, and ensure that the benefits from using it are shared fairly. Its Article 8(j) commits countries to:

> *"respect, preserve and maintain the knowledge, innovations and practices of indigenous and local communities relevant for the conservation of biological diversity and to promote their wider application with the approval of knowledge holders and to encourage equitable sharing of benefits arising out of the use of biological diversity".*

The Nagoya Protocol of 2010 is a supplement to this convention: it provides for the fair and equitable sharing of benefits arising from the use of genetic resources.

The Nagoya Protocol aims to ensure that communities, too, benefit from the use of this genetic diversity and their knowledge. This is known as **access and benefit sharing**.

Article 12 of the Nagoya Protocol obliges states to

> *"take into consideration indigenous and local communities' customary laws,* ***community protocols*** *and procedures, as applicable, with respect to traditional knowledge associated with genetic resources" [emphasis added].*

In 2009, in the lead-up to the Nagoya Protocol, Natural Justice, a nongovernment organization focusing on legal issues, started supporting communities to write down their claims. They were named "biocultural community protocols", or

"biocultural protocols" for short. The first such protocol for livestock was created by the Raika of western Rajasthan with the support of Lokhit Pashu-Palak Sansthan, a local NGO (see the Preface). Other protocols followed (see Chapter 11 for some of them). In 2010, the League for Pastoral Peoples in collaboration with the LIFE Network collated these experiences into a booklet (LPP and LIFE Network 2010). The idea was discussed further at the 11th Conference of Parties to the Convention on Biodiversity in Hyderabad in 2012.

See Chapters 4 and 5 for more about the legal background to community protocols, and Chapter 12 for the text of relevant international treaties and agreements.

While many have found the idea of community protocols attractive, the process of developing them is a challenge. This manual aims to make this process clearer and easier.

Why produce a community protocol?

A community protocol is not an end in itself. Rather, it is a tool to achieve one or more goals. These include to:

- **Recognize a local or indigenous community** as steward of biological diversity and holder of traditional knowledge under the Convention on Biological Diversity.
- **Conserve a breed**, biodiverse production system and traditional knowledge.
- **Promote community awareness**, empowerment and mobilization.
- **Enable access** to a livestock breed by outsiders and the fair and equitable sharing of benefits from it with the community that developed and maintains it.
- **Achieve recognition** of rights and claims to resources.
- **Identify problems** and possible solutions, leading to conservation and improved livelihoods.

See Chapter 10 for ideas on how to use community protocols to achieve these goals.

Recognize a community as steward of biological diversity

The situation Article 8(j) of the Convention on Biological Diversity recognizes the role of local and indigenous communities and their traditional knowledge in the conservation of biological diversity. But pastoralists are generally not recognized for their services in this respect. They are even accused of destroying biodiversity through overgrazing and hunting.

How a community protocol can help A community protocol puts on written record the role of a community as holder and steward of traditional knowledge, especially a particular breed. It provides evidence for this role.

Conserve a breed, a production system and traditional knowledge

The situation A breed contains unique combinations of genes that determine its outward appearance, hardiness, disease tolerance, and much more (see Chapter 2). These gene combinations have been developed through management over centuries of selection as the animals have interacted with the herders and with the environment. The decline of local breeds threatens the maintenance of these unique genetic combinations.

A breed is much more than just a collection of genes We can think of a breed as a device that people have developed to use a particular environment. The breed reflects the tasks and conditions for which it has been developed. It embodies knowledge about the environment and the management of livestock, developed over centuries of trial and error, and constantly adapting to changing conditions. When this process is interrupted, this knowledge risks being lost.

As animals are exposed to stress and shocks (such as droughts or diseases), those that survive pass on their genes to their offspring. This natural selection is manipulated by the livestock keepers, who decide which animals to use for mating, which ones to help survive, and which ones to sell. Most importantly, livestock keepers make decisions on their herds' grazing itineraries (what kind of pasture the animals have access to in the different seasons) and their watering regime. While the herders cannot change the environment, through management they determine how the animals experience it.

Biodiversity is not just a question of genes The ability of pastoralists and their breeds to use diverse, difficult environments for food production is not just a matter of genes; it is also dependent on learned behaviour. This includes not just the brain but the basic functioning of the animal's body, for example the digestive or immune systems. Learning is very much part of the diversity of life – of biodiversity.

Young animals learn from their mothers and other animals in the herd, and accumulate knowledge and skills in the course of their life. Some examples:

- Which plants to eat, and in which combinations
- How to negotiate plants' defence mechanisms (such as thorns and seasonal toxicity)
- How to negotiate difficult terrain
- How to manage heat stress
- How to orientate
- How to make the best of severe watering regimes
- How to behave in a herd
- How to relate to humans.

For example, camels moved from the Thar desert to the Aravalli Hills in Rajasthan, India, are at a loss with respect to grazing, unless some animals in the herd already know the area. Cattle entirely brought up on pellets in zero-grazing conditions don't know what to do with grass (Provenza and Launchbaugh 1999).

Learning is much faster than genetic change. It makes it possible for animals to adapt much faster to new conditions than would be possible through breeding. Pastoralists use their animals' capacity to learn and interact with the environment as a crucial part of their production strategies. Competent herds in the hands of competent herders are more productive, more resilient, and require less labour (Krätli 2008).

This mutual dependence of genetics, environment and knowledge is the reason it is so important to maintain pastoral breeds *in situ* – in the locations and production system where they have developed. Animals need to be able to learn, and to pass on their skills to other animals in the herd. This is an essential aspect of breeding in a pastoral system. Deep-freezing semen and eggs can preserve the genetics, but it does not allow it to adapt to changing conditions, and above all it does nothing to preserve the critical learned behaviour and competence. Reconstituting a pastoral breed from frozen genetic material is simply not possible.

How a community protocol can help By drawing attention to the existence of the breed and raising the livestock keepers' awareness of its value, a community protocol can help conserve the genetic resources. By doing the same for the traditional knowledge, it helps preserve that too. A community protocol describes the breed and the community's role in developing and maintaining it; this makes it possible to design initiatives that take these into account: for example, by developing programmes to conserve the breed both *in situ* and *ex situ*.

Document the breed and the associated traditional knowledge

The situation As the world changes, much traditional knowledge is in danger of being lost. As older people die, they take their accumulated knowledge with them. Extension services, development initiatives and commercial interests press livestock keepers to give up their traditional activities and adopt new ones. Modern education ignores traditional wisdom – or denigrates it as "backward" and "primitive". Younger people do not learn skills from their elders, especially if they are at school. Many are attracted to lifestyles and careers outside livestock-keeping.

How a community protocol can help Community protocols document this traditional knowledge. This is useful mainly for the community itself: it helps people conserve this knowledge, appreciate its importance, and inspire the younger generation to use and build on it.

For outsiders, a community protocol provides fascinating glimpses into the world of livestock keepers according to their own perspectives and concepts. The protocols that have been completed have brought to light significant pieces of previously unrecorded information.

The protocol of the **Pashtun** in Pakistan describes their customary laws that regulate access to grazing lands and water, their migration routes and drought-coping mechanisms. It also expresses alarm that the best genetic material is being systematically purchased by Arab traders.

The **Samburu** protocol provides details about the use of animals in life-cycle rituals:

- Bulls are slaughtered to decide on the time for mass circumcision of boys.
- Boys are circumcised while wearing and sitting on Red Maasai sheep skins.
- As part of wedding ceremonies, the man must find a pure Red Maasai sheep (signified by its red colour, long ears and clear eyes) and present it to his future mother-in-law, who is then referred to as *Paker*, literally meaning "the one who has been given sheep". Another sheep is slaughtered for the wedding.
- The bride is given a calabash full of milk and a gourd that is filled with the fat from a bull slaughtered for the wedding. If the fat from the bull is not enough, a Red Maasai ram is slaughtered and its tail fat is used to fill the gourd. The bride drinks the milk to assuage her fears about her new home; she moisturizes her skin with the fat to help her relax.

Community protocols may identify breeds that have not previously been recorded.

The **Raika** in India describe the breeds that they have developed, including the Nari cattle, a distinct breed that has not yet been recognized officially.

The community protocol can provide much of the information needed to register a breed with the government, or update information for breeds that are already officially recognized. Such recognition can in turn lead to benefits such as research attention, extension support, conservation programmes, and funding for local initiatives.

Raise the visibility of livestock breeds and the role of communities in creating and maintaining them

The situation Because they are not well-documented, local breeds are often invisible to outsiders. Scientists and professional breeding organizations often ignore the breed as being "undifferentiated", "nondescript" or simply as not existing. The communities that care for them may suffer a similar fate. The people who keep them frequently have low status in society, especially if they are mobile pastoralists. Governments often regard them as difficult to control or even as a threat.

How a community protocol can help Community protocols can change the outside perception of breeds by putting the people and communities that have nursed them centre-stage. They transform "genetic resources" that seemingly exist in a social void – and belong to nobody in particular– into the heritage or property of specific communities, and flag them as the products of traditional knowledge of these communities. They establish pastoralists and other traditional livestock keepers as indigenous and local communities who conserve and sustainably use biological diversity. Such communities are entitled to certain rights under the Convention on Biological Diversity.

Community protocols make visible the ways of life, practices and situation of livestock keepers. They offer insights into the problems and constraints facing the breed, and identify the people who are

in the best position to tackle them. They give scientists and educational institutions a starting point on which to base research and training.

Promote community awareness, empowerment and mobilization

The situation Many livestock-keeping communities do not realize that their breeds are special. Indeed, they may prefer other breeds that produce more (under ideal conditions) and cross their traditional animals with exotic breeds. The same goes for traditional knowledge: they may not value the old ways of doing things, and may refuse to pass their knowledge on to the younger generation. They are egged on by extension agents and development advisers who believe that modern is best.

How a community protocol can help Developing a community protocol requires a participatory approach and the involvement of a lot of community members. When well done, the process increases the community's awareness of the value of its breed and its traditional knowledge. It becomes clear that while the breed may not yield the most milk or meat, it is hardy, cheap to keep, and keeps on going long after modern breeds or crosses have succumbed to hunger, thirst or disease. Community members also realize the value of maintaining traditions and of employing techniques they have learned from their forebears and facilitates consensus around core values and strategies.

Among the **Samburu** in Kenya, the community protocol process drove home the point that the traditional Red Maasai breed could buffer people from drought and secure their livelihoods. The Dorper sheep breed promoted by the government was useful only in good years.

The process also helps the community to articulate the value of its livelihood or production system. They become aware of how national and international laws affect them, and how they can use these laws to support their interests. They learn about their rights, they gain documented evidence they can use to support their case, and they can get organized to lobby for their rights.

Raika leaders were summoned from Rajasthan in western India to Delhi for a hearing with the Central Empowered Committee, a body affiliated with the Supreme Court, about their customary grazing rights in the Kumbhalgarh wildlife sanctuary. Having a printed document that referenced the relevant laws and legal frameworks gave them self-confidence and put them into a stronger bargaining position.

While establishing their community protocol, the **Pashtuns** decided to form a breeders' association. This aims to organize the livestock keepers and advocate for their rights, educate them on how to cope with global warming and desertification, and raise awareness about the importance of livestock and their breeders for future food security.

As an outcome of their community protocol process, the **Samburu** of northern Kenya decided to revive the Red Maasai sheep and try to avoid cross-breeding.

The **Lingayat** breeders who keep Bargur Hill Cattle in Tamil Nadu committed themselves

to continuing various measures to maintain the integrity of their ecosystem, including protecting the forest against fires, sustaining the predator population by offering some of their livestock as prey, combating illegal logging and poaching, and eliminating *Lantana*, a toxic, invasive plant species. With respect to livestock, they undertook to continue the customary manuring of the forest as well as rotational grazing, to keep their traditional Bargur cattle breed and conserve their ethnoveterinary knowledge. The community protocol may eventually help them regain their rights to keep animals in the forest.

The process of establishing protocols generates awareness among livestock keepers about the similarity of their problems worldwide and leads to a feeling of solidarity.

The **Samburu** protocol states, "We express solidarity with all livestock keepers across the world. We celebrate our diversity as well as acknowledge the similar ways of life, values, and challenges that we face."

Most livestock-keeping communities have very few documents they can draw on to campaign for their interests. The community protocol can become a valuable piece of ammunition for them to influence the government and sway public opinion. It provides information in a succinct form that can be given to officials, activists and the media, and that can be used in meetings, training and awareness-raising.

Enable access and benefit-sharing

The situation Imagine an inventor who comes up with a new gadget that is incredibly useful. The inventor wants to make and sell these gadgets. She registers her invention with the patent office, and starts selling the gadgets in a shop. But other people like the gadgets and want to make and sell them too. The inventor can use the patent to protect her invention. If the other people want to make and sell the gadget, they must first get the inventor's permission and pay her a license fee.

Access and benefit-sharing works in a similar way. The community that has developed and maintains a livestock breed can claim rights over it – like the inventor claiming rights over the gadget. Other people or organizations who want to use the breed, or the traditional knowledge that goes with it, must first ask permission of the community (this is the **access** part). They must also agree to share with the community any profits they may earn from using the breed or the knowledge (this is the **benefit-sharing** part).

Each country has a different approach to access and benefit-sharing: some have passed the necessary laws and regulations. Others are in process of doing so, have not yet done so, or do not intend to do so.

How a community protocol can help Whatever the situation, a community protocol is prescribed in international law as a way for communities to lay claim to rights over the breed and the associated traditional knowledge. Without a community protocol, their chances of obtaining benefits from these are smaller. See Chapter 4 for more on this.

A community protocol that is deposited with the appropriate authorities protects the community's intellectual property rights. It makes the government, researchers and companies wishing to exploit the breed and the associated traditional knowledge aware of the community's claims. It forces them to take the community's claims seriously, to obtain the community's prior informed consent, and to agree with the community on terms.

A word of caution Access and benefit-sharing, as outlined in the Nagoya Protocol, refers to a very narrow range of uses for the breed: for research and development on the genetic or biochemical composition of genetic resources, such as using biotechnology. It does not cover conventional breeding, and it may anyway prove impossible to enforce. The amount and types of benefits that communities may be able to claim are likely to be limited.

Promote rights and claims to resources

The situation Livestock keepers rely on a variety of resources: grazing land, watering points, sources of fodder, migration routes, access to markets, and so on. Many of these rights are customary: the livestock keepers have herded their animals in particular areas since time immemorial. But these rights are increasingly under threat. The spread of cropping, the privatization of land and the designation of nature reserves all limit the amount of grazing available. Fences and movement restrictions cut off access to pasture and water points. New rules eliminate markets.

At the same time, traditional grazing patterns may be vital to maintain landscapes, for example to prevent the encroachment of bush and to maintain particular ecosystems.

How a community protocol can help A community protocol states the community's rights to access these resources. It documents the community's use of the resource and can be used to prevent others from expropriating it. It can be used to appeal to the law, the conscience of government officials, and public opinion.

Identify problems and possible solutions to improve livestock management and livelihoods

The situation Livestock keeping communities often face multiple problems – both related to the livestock production and marketing, and broader issues such as a lack of education, health care and infrastructure. They are often poorly organized and scattered over a large, remote area. It can be difficult for them to identify problems and visualize potential solutions. They often find it difficult to give voice to the problems they face and to win support for their concerns.

How a community protocol can help The process of producing a community protocol brings the community together to focus on an issue they all have in common – their livestock. It can help them get organized around this issue and analyse the situation from their own perspective. They can identify problems that were hitherto unknown to outsiders (such as the government) or were not given high priority.

The community protocol can also identify opportunities for possible improvements – such as im-

proved marketing, niche products, or development interventions. It can stimulate self-help initiatives by the community itself, or act as a catalyst for development interventions funded by the government or development agencies. It can ensure that the community gets a say in initiatives that affect them.

The **Samburu** protocol describes how climate change and population pressure are straining resources and community harmony. It notes that exotic breeds die more quickly than the indigenous breeds, and bemoans the fact that children are learning less about traditional knowledge. It attributes this to a number of factors, including the reduction of access to grazing and the lack of emphasis on pastoral practices in the formal educational system.

The **Raika** protocol identifies their lack of access to the Kumbhalgarh Sanctuary as main challenge to their continuing their livelihoods. It also identifies a lack of marketing opportunities as an issue that needs to be resolved.

The **Lingayat** protocol reports problems from the rising elephant population, despite this community being accustomed to coexisting with wildlife. It also says that younger people do not want to put up with the hardships of a life based on animal husbandry, but are frustrated about a life as unskilled labourers. "We are caught in a no man's land of being unable to carry on our traditional livestock-keeping and unwilling to suffer the indignities of life as unskilled labourers", it says. Similar sentiments are echoed by the Raika and Samburu protocols.

The **Pashtun** describe their lack of inclusion in policymaking processes as a major obstacle to biodiversity conservation.

The protocol of the **camel breeders of Rajasthan** identified the absence of a market for camel milk as a hurdle towards making a livelihood from camel breeding. Subsequently the Government of Rajasthan made available funds to set up a camel dairying system.

4 Access and benefit-sharing

What happens if someone from outside the community wants to use the community's breed? For example, if a company wants to use it to create a new breed that is hardy or resistant to disease? Access and benefit-sharing are a way of ensuring that the community benefits. This chapter answers some questions that community members are likely to have.

Kuruba shepherd leaders discuss plans for their protocol

Access to genetic resources and associated traditional knowledge

What is being rewarded? This may be viewed narrowly or broadly. The Nagoya Protocol focuses narrowly on two things:

Genetic resources. This may be the right to use genetic material for breeding or research from a specific animal or group of animals, or from the breed as a whole. For example, a researcher or a company may purchase an animal (or a group of animals) for breeding, or may take semen or eggs.

Traditional knowledge. The right to use the traditional knowledge associated with a particular breed.

More broadly, however, access to genetic resources and traditional knowledge also depends on

breed maintenance and ecosystem services. The community's work to develop and conserve the breed, its work to conserve biodiversity, or its stewardship of a particular ecosystem (or ecosystems). Without this work, the breed would not have been developed and would not be maintained. It therefore makes sense to compensate the community that performs this service so the breed and the environment it depends on will continue to be available in the future. If the global community wants to have access to such adapted animal genetic resources, communities must have support now, or access will become impossible.

Exactly what is rewarded will depend on the national laws in each country. These may conform to the Nagoya Protocol, or may be broader or more specific.

Communities' rights do not depend only on access and benefit-sharing. They may be entitled to (or may claim) certain rights anyway – for example the right to graze their animals in particular areas, to migrate along traditional routes, or to breed and sell their animals. Access and benefit-sharing arrangements must not restrict these rights.

Conditions

Two conditions are basic to access and benefit-sharing:

Prior informed consent (PIC). The new users are obliged to get the community's permission to use the genetic resource and the traditional knowledge associated with it. Getting the signature of the village chief is not enough: the community must be fully informed about the situation and must be able to understand the implications of any agreement they reach.

Mutually agreed terms (MAT). The community and the new users must reach an agreement on how the genetic resource may be used, how the benefits are to be shared or how much the users must pay, and to whom.

Benefit claimants

Who can claim benefits? The State (i.e., the government) has sovereign rights over the animal genetic resources in its territory. But the Nagoya Protocol obliges governments to share the benefits from the genetic resources (and the associated traditional knowledge) with the communities that hold them. Whether it does so, and how much of the benefits are shared with the community, depend on the national laws in each country.

Exactly who can claim benefits also depends on the national laws. Possibilities include:

- The national government.
- A regional or district government or local authority.
- A particular community, or a group (or groups) within the community.
- A particular organization (e.g., an organization of livestock breeders).
- Individual breeders.
- Research, education or training organizations.

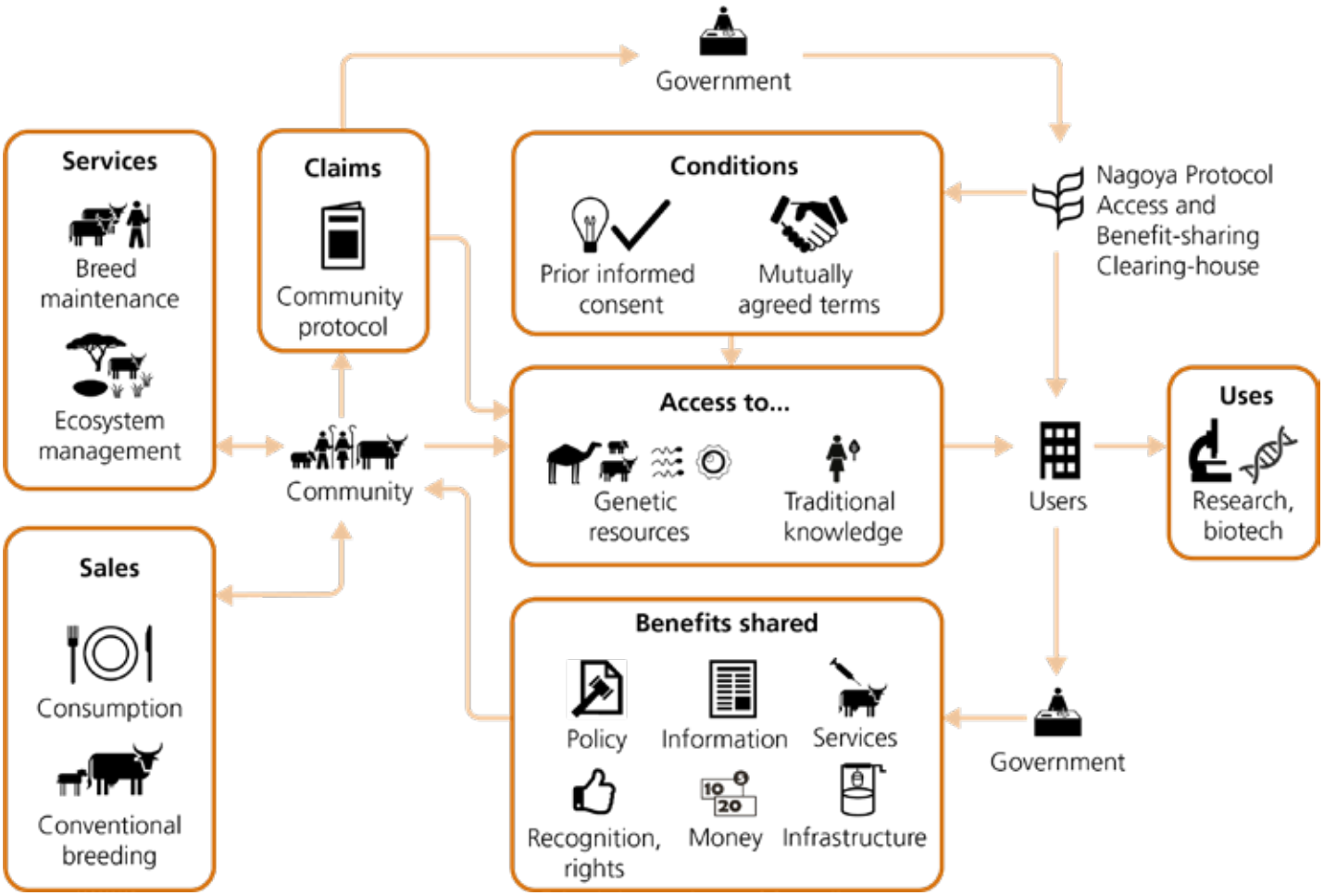


Figure 2. Access and benefit sharing

Users

Who may gain access to genetic resources? Who pays? In principle, the "user" (the organization that gains access to the genetic resources or traditional knowledge) should pay. This may be a company, a research institution, a government, or some other body.

The type of deal may vary. Some possibilities:

- The user may negotiate an individual deal for one-off access to the genetic materials of a specific animal or group of animals.
- The user may negotiate a longer-term or broader access to the genetic materials of a particular breed.
- The user may negotiate agreement to use the indigenous knowledge associated with a particular breed.
- The government may conduct a biodiversity audit and require users to compensate a community for the use of their genetic resources or traditional knowledge.
- The government may impose a tax on livestock-sector companies to compensate for the genetic erosion they have caused.
- Projects for information exchange, technology transfer and capacity building, and the management and sustainable use of animal genetic resources may come from the funding allocated for the Global Plan of Action (CGRFA 2010).

Uses

How may the users use the genetic resources or traditional knowledge? The Nagoya Protocol covers only research and development on the genetic or biochemical composition of genetic resources, such as using biotechnology. It does not cover the trade in farm animals for consumption, multiplication or conventional breeding, and it does not restrict the rights of livestock owners to sell, give away or bequeath their animals. The Nagoya Protocol comes into play only if someone wishes to use the genetic material for genetic or biochemical research and development. If so, they will be liable to reach an agreement with the provider (the community) and share the benefits that may accrue.

Benefits

What types of benefits can a community hope for, or negotiate for? The Annex to the Nagoya Protocol (see Chapter 12) gives a list of possible benefits, though other benefits are also possible. The nature of the benefits will depend on the national laws and any agreement between the government, the community and the source of the funds.

The types of benefits may be monetary or non-monetary. **Monetary benefits** that benefit the community directly may include:

- Fees for selling a breeding animal or for allowing researchers to take semen or eggs.
- Payments made up-front or in stages.

- Payments for royalties or licence fees if the breeding or research results in commercial products.

Restrictions may be made on how the money may be used. For example, it may have to be used for activities that directly support the livestock breed.

Non-monetary benefits that help the community directly may include:

- Payment for activities to **maintain the breed** or the production system it is part of. This may include breeding programmes, subsidies for maintaining animals (for example, for rare breeds), awareness raising, and research on the breed and production system.

- Contributions to the local economy – such as a development project to improve roads or other **infrastructure** or for product development and marketing.

- Food and livelihood security benefits – including services such as support for education, veterinary services or women's empowerment or building up a **value chain**.

- Social **recognition** – such as official acknowledgement of the community as the maintainers of the breed.

- Favourable **policies**, such as permission to use certain grazing areas or watering points.

The community may also benefit indirectly, for example if the government uses the money to improve the general infrastructure or education system.

Decision makers

Who decides how to use the benefits? This again depends on the national laws. The funds may be free for the recipients to use as they wish, or (more likely) they may be subject to restrictions. For example:

- If the government receives the funds, it may be obliged to place them in a special account and use them in a way that directly benefits the community. It may have to consult the community and get its approval for how the funds are used.

- The funds may be paid to a community group or trust fund, which is required to use them in certain ways. The community may have control over the funds, or may at least have some say in how they are used.

- If the funds are paid to individuals, they may be able to use them as they wish.

One possibility is to set up a **benefit-sharing fund**, into which the users of the genetic resources and traditional knowledge pay fees. The money may be earmarked for particular breeds or communities. Organizations recognized by the communities may be able to draw on the fund for projects that benefit the community and enable it to maintain the breed.

Community protocols in access and benefit sharing

Community protocols are vital to the access and benefit-sharing process. They lay out in black and white the community's claim to the breed and describe their knowledge about the breed. They are the equivalent of a patent that is registered with the patent office: they show that it is the community that has the claim, and not someone else. They establish a breed as "prior art", which means nobody else can claim it as intellectual property. For instance, when US researchers tried to patent the healing properties of turmeric, the patent had to be withdrawn after the Indian Council for Scientific Research showed that these had already been described in ancient Ayurveda texts, establishing its use for medicinal purposes as "prior art".

Exactly how this works in practice depends on the law in each country (or in federal systems, in each state). Countries that have ratified the Nagoya Protocol must incorporate its provisions into their national laws (but may not yet have done so).

It is not enough just to create a community protocol. National authorities very often neglect to consider the needs or opinions of pastoralists or other livestock keepers. It may be necessary to lobby them to ensure that the community's claims to a breed are taken seriously. A copy of the protocol must be deposited with the national biodiversity authority and focal point on access and benefit-sharing.

5 Community protocols and the law

One of the roles of a community protocol is to act as a legal document. It provides evidence of a community's relationships with a livestock breed and an area, in a form that can be presented to the government and courts and used to lobby for changes in laws and policies.

The environment is a relatively new area for law and policy. Many countries do not yet have a full set of laws and policies to govern the environment, or they are revising those that they have. Community protocols can influence the direction such rules will take.

At the same time, community protocols are an emerging concept. No standard form exists, and their use is still being tested in various countries. Their role will develop and change over time.

The Nagoya Protocol and the Global Plan of Action for Animal Genetic Resources are two of the key documents relating to community protocols

Get legal advice

Many different laws may influence a community of livestock keepers. They will be written in legal language and may be difficult to understand. It may even be difficult to find out which laws are relevant in a particular case. That makes it important to get legal advice when drafting a community protocol, and if possible have a specialized lawyer on the team that helps the community write the draft.

Figure 3. The long road from treaty to implementation

Levels of law

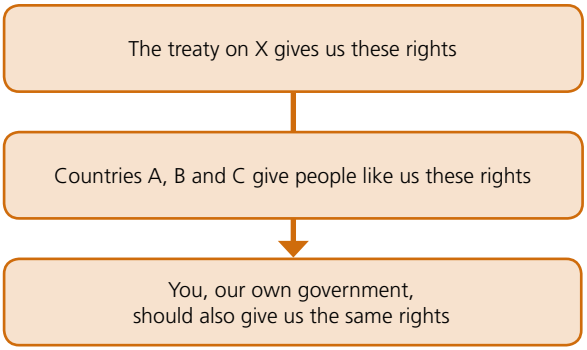
At least four levels of law and policy affect, or are influenced by, community protocols: international, national, local and customary.

International law

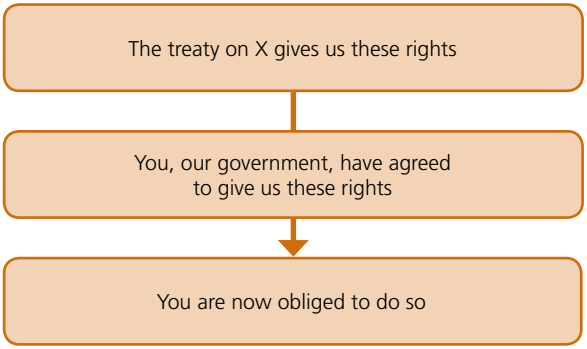
At the international level, community protocols build on, support, or are mentioned in, several treaties and agreements.

For an international treaty to have the force of law in a particular country, that country must have signed and ratified the treaty, and incorporated the provisions of the treaty into national law. For the law to take effect, it must be implemented: policies must be created on how to implement it in practice, officials must be trained, and people must be informed of the new rules and how to comply with them. All this takes time.

Even if a country has not signed or ratified a particular treaty or agreement, it is still possible to use its provisions to press the government to change its policies or laws. Much of the value of a treaty lies in the ability to use it to cajole or embarrass a government to change its actions. This is useful even if the agreement is not legally binding on governments. The argument goes something like this:



If a government has signed and ratified a treaty but not yet incorporated its provisions into national law, the strategy is to persuade (or force) it to do so. The argument then goes like this:



Legally binding treaties relating to pastoralists and other livestock keepers include the:

- Convention on Biological Diversity
- Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from Their Utilization

Non-legally binding resolutions and agreements include the:

- Global Plan of Action for Animal Genetic Resources
- Interlaken Declaration on Animal Genetic Resources
- UN Declaration on the Rights of Indigenous Peoples
- Right to Food Guidelines

See Chapter 12 for the relevant texts of these treaties and agreements.

National laws

Governments may pass laws in order to comply with a treaty, or they may do so without reference to a treaty.

Laws go through a series of steps. They start off as policies: statements by the government about what it intends to do. The policies are then distilled into a bill, a draft law that is discussed in parliament. Once passed, the bill becomes a law. The responsible ministries then issue a set of regulations and procedures laying out how the law will be put into effect (Figure 4).

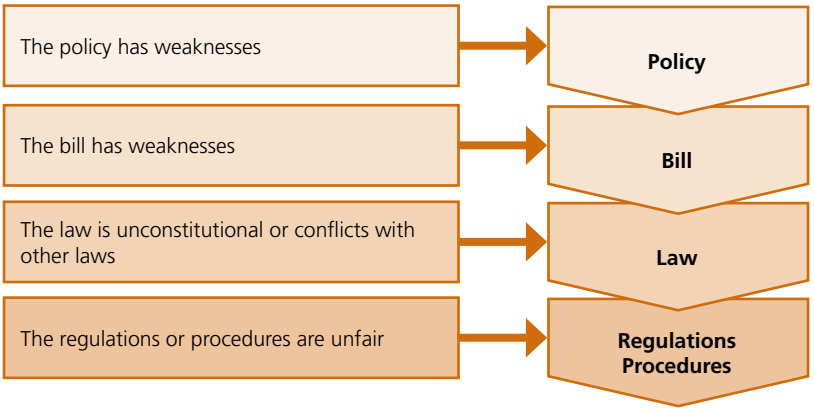


Figure 4. Challenging policies, laws and regulations

At each stage in this process, it is possible to influence or challenge the provisions. During the policy and bill stages, you can point out weaknesses, neglected subjects, injustices, faulty provisions or unintended consequences. Don't just criticize; make constructive suggestions to improve the policy or bill.

You need to understand the process by which policies and bills are made – and who to approach to make sure the provisions reflect your concerns. Various windows of opportunity may arise during the policy process (Table 3). Community protocols can be useful in each one.

Once a law is passed, it is much harder to make changes. You could claim that the law is against the constitution, or that it conflicts with other laws or treaties. Or you may object to the way the law is being implemented in a particular instance: that

Table 3 Windows of opportunity for influencing policy

Window	Example	Explanation	How to use the window
Routine servicing	Monthly reports of food availability Seasonal yield forecasts Reserve Bank reports Food Security Council meetings	Various government bodies prepare regular reports on the food security situation Government bodies meet regularly to plan policy changes	Release information just before regular meetings Try to get your issue onto the meeting agenda After the meeting, prepare information in response to decisions made
Cyclical events	Five Year Plan cycle General elections World Food Day (16 October each year) Annual agricultural fairs Drought leading to food security crisis	Events at more-or-less predictable intervals Some events (e.g., World Food Day) give chance to bring issues to policy-makers' attention Some emergencies (e.g., droughts) can be predicted in advance and tend to follow a cycle	Prepare info campaign in build-up to event Prepare detailed briefs on the issue in time to influence the decision
One-off events	Policy reviews Development of new party policies International speech by Prime Minister Discussion of new law in parliament Negotiations over a new international agreement	Do not occur on a predictable cycle But usually have a long lead-time You have time to prepare policy-related information	Prepare info campaign in build-up to event Prepare detailed briefs on the issue in time to influence the decision
Emergencies	Livestock epidemic leading to ban on livestock movement Erection of fencing across migration route Violence in grazing area	Unpredictable events that call for an immediate response	Respond quickly with policy proposals to solve problem (or avert future problems)
Stimulated policy discussions	An issue not yet on the policy agenda	Don't wait for the issue to appear on the agenda Try to put it there!	Run a campaign to raise awareness about the issue Prepare policy suggestions about the issue

Source: Mundy (2011)

the regulations are unfair or are wrongly interpreted. But such challenges are often costly, require legal specialists, and can take many years. So it is much better to try to influence a policy before it becomes law.

For example, a forest department may issue a regulation that bans grazing in a particular nature reserve. The community may object to this for various reasons. These might include:

- The regulation is not based on a law, or contravenes a law.
- It violates rights the community had beforehand and that are guaranteed by another law.
- It is arbitrary or is being implemented incorrectly.

Laws and regulations always leave a certain room for interpretation. In making decisions, officials rely on their own understanding of the case and on precedent (what other officials have decided previously). They may have limited information on which to base decisions. They may be subject to lobbying by interested parties. They may make mistakes, or they may be bribed to make certain decisions.

Community protocols can help overcome each of these situations. They provide information that officials may lack. They can support lobbying efforts by the community to counter pressure from other sources.

What does the law cover? National laws may have various provisions for access and benefit sharing:

- They may not make any recognition or provision for it.
- They may recognize and make provision for sharing benefits derived from genetic resources or traditional knowledge, or both (this would comply with the Nagoya Protocol).
- They may cover services such as breed maintenance and ecosystem services.

Sub-national laws, by-laws

In federal states (such as India), individual states pass laws. Local authorities may also impose rules (known as by-laws) that govern what people may or may not do in their area. The procedure for developing such laws and rules is similar to the one used for national laws.

If a community wants to challenge a sub-national or local law, it can either appeal to the level of government that passed or implements it, or to a higher level of government.

If the community just wants to solve its own particular problem, it can try to resolve this at the lowest relevant level of government. But it may be a good idea to set a precedent and try to change a situation for other communities facing a similar problem. That usually means appealing to a higher level of government.

Customary laws

Many groups of livestock keepers have their own customary laws that govern things like who has access to what areas of pasture or water points,

how herds are managed, and how disputes are resolved. Sometimes these are compatible with the national law; sometimes they may conflict with it. The government may recognize and support such customary laws, or may disapprove of them.

A community protocol should mention such customary laws where they are relevant. It may be possible to persuade the government to recognize the community's customary law.

Some customary laws may be too restrictive. For example, they may restrict the rights of women to own or make decisions about livestock. The community should consider such issues and decide whether the customary law should be changed.

Box 3 From India to Brazil

In 2012, Brasif, a Brazilian agribusiness investor, applied to the National Biodiversity Authority of India for access to 4,000 bovine cattle embryos. The embryos were to be supplied by the Sagwadi Education & Gaushala Charitable Trust of Bhavnagar, in the northwestern Indian state of Gujarat. Brasif requested genetic material from Ongole bulls and Gir and Kankrej cattle breeds.

In 2015, the expert committee on access and benefit sharing of the National Biodiversity Authority met to evaluate the economic value of the embryos. A price of INR 12 million (USD 190,000) was agreed and has been paid.

The National Biodiversity Authority has set up a committee to determine who is entitled to receive this money.

This case illustrates both the amount of time that it may take between a request for access to genetic materials and their transfer to the user, and the difficulty in working out who should benefit from the funds generated. It also emphasizes the advantages of livestock keepers' being organized into a formal organization that can act as recipient for the funds.

Source: Meyer (2017), slide 10

Examples of laws

Several countries have established legal framework for access and benefit sharing through national legislation.

India

Access and benefit-sharing in India is governed by the Biological Diversity Act of 2002 and the Access and Benefit Sharing Regulation of 2014. These mandate non-Indian users to apply to the National Biodiversity Authority for access to biological resources and the associated traditional knowledge. Indian users must apply to State Biodiversity Boards.

The lowest level of local government in India, the *gram panchayats*, are empowered to constitute biodiversity management committees and local biodiversity funds. The National Biodiversity Authority or State Biodiversity Board consults these committees in negotiating prior informed consent with the user and community.

Community protocols are not mentioned in Indian law. But there is a near-equivalent: the people's biodiversity registers. These are legal documents that contain comprehensive information on the availability and knowledge of local biological resources, their medicinal (or any other) use, and any other traditional knowledge associated with them.

From the community's point of view, the people's biodiversity registers have two drawbacks: they are compiled by the *gram panchayat* biodiversity management committees, not by the community itself. And *gram panchayats* cover a relatively small area, while livestock-keeping communities may cover

a much larger area, especially if they are mobile pastoralists.

The community can compile its community protocol to use in developing the people's biodiversity registers. It can also lobby for representation on the local biodiversity management committee. Having a completed community protocol can be a useful way to gain such representation.

The National Biodiversity Authority or State Biodiversity Board are mandated to disburse benefits from the use of biological resources or traditional knowledge to the local biodiversity management committees (or benefit claimants) in the area where they originated.

If the origin of the biological resources or traditional knowledge is not known, the law allows the funds to "be used to support conservation and sustainable use of biological resources and to promote livelihoods of the local people from where the biological resources are accessed." This clearly highlights the community's role in promoting the sustainable use of biological resources (Box 3).

Namibia

Namibia's legislation on biodiversity highlights the protection of rights of the local communities over biological and genetic resources and associated traditional knowledge. The biodiversity law mandates community protocols to document the communities' knowledge of their genetic resources and to state their claims (Box 4).

Challenging laws and regulations

It is possible to challenge laws or regulations in three ways: legal, political and public opinion. These approaches are not mutually exclusive. Communities should consider some combination all three approaches to trying to influence the laws and regulations that affect them.

Legal

The community can challenge a law or its implementation in the courts. This will involve preparing a case and presenting it in court and trying to persuade a judge that the law should be applied differently.

To do this, the community will need help from a lawyer. Presenting a case in court can be time-consuming and costly. These costs must be covered somehow. Some law firms, legal NGOs and donors help cover some or all of the costs.

Political

A community can try to persuade politicians and other decision-makers to change a policy, law or regulation, or to interpret it in a different way. This involves lobbying policymakers, presenting them with the facts and the community's opinion, and trying to convince them of the need to make a change.

Box 4 Legislation in Namibia

Access to Biological and Genetic Resources and Associated Traditional Knowledge Act, 2017

Art. 1. Definitions

…

"community protocols" means a broad range of practices and procedures, both written and unwritten, developed by local communities in relation to their genetic resources and associated traditional knowledge which cover a range of matters, including how local communities expect external actors to engage with them;

…

Article 23. Regulations

The Minister may make regulations relating to -

…

(o) community protocols detailing a clear process for access to biological and genetic resources, acquiring free and prior informed consent and establishing mutually agreed terms and benefit sharing agreements with respect to any utilisation of their biological and genetic resources and associated traditional knowledge;

…

Source: Republic of Namibia (2017) [emphasis added]

Public opinion

It is also possible to try to change public opinion about the issue (preferably while the proposed law is still in the policy stage). This involves educating the public (or specific groups of people) about the community and its needs, raising the awareness of the community members themselves, and organizing the community and their supporters to push for change.

Just changing public opinion is not enough. It is also necessary to change the rules through legal or political means. Having strong public support may be very important to do this.

Part 2
Producing a community protocol

6 Who produces community protocols?

The incomparable Dailibai Raika: an inveterate women leader

Ideally, it is the communities themselves that initiate community protocols and carry them through. In practice, however, this can be difficult. Finalizing a community protocol requires a knowledge of international and national policies and laws that few groups of livestock keepers have. So it is usually people or organizations from outside the community that help them create and use a community protocol. These may include:

- **Non-government organizations** endorsed by communities.
- **Community organizations** or members of the community.
- **Universities** or educational institutions.
- **Individuals** (researchers, community workers, academics, activists).
- **Government agencies** with the mandate of implementing national legislation on biodiversity and indigenous and local people's rights.
- Some combination of the above.

Even if outsiders take the initiative in creating a community protocol, it is vital that the community members are fully involved: that they understand and approve of the idea, they help guide the process, and they contribute to and approve of the content.

Who is the "community"?

Defining the "community" behind the protocol can be a challenge. It may be a village, an ethnic group, a caste or social stratum, a group of animal breeders, or a professional association. What matters is that the group has a common resource or body of knowledge. For example, a group of shepherds may keep a particular breed, or manage their animals in a way that maintains a certain type of landscape.

But communities of livestock keepers are rarely a small group of people who are all in agreement with each other. They may include large numbers of people, scattered over a wide area, with poor communications. They may be organized into groups that are recognized by the government, and by community members themselves, as representing their interests. Or (more likely) they may not be. They may include sub-groups that compete or are in conflict with each other. The prospect of receiving benefits for their breeding activities may exacerbate existing divisions or create new ones.

The "community" may also conceal hidden divisions. Women, for example, may do much of the work in managing the animals, but have little say in decisions that affect them. Clan leaders or elders (almost always men) may make all the decisions, regardless of the opinions of younger people or women. Richer elites may dominate poorer community members.

When working with the community, it is vital to understand these dynamics and sensitivities. A community protocol should strive to represent the community as a whole, and not just a particular faction or segment within it. Similarly, access and benefit-sharing arrangements must benefit the whole community, and not just a particular group of well-connected breeders.

Box 5. Definition of "community"

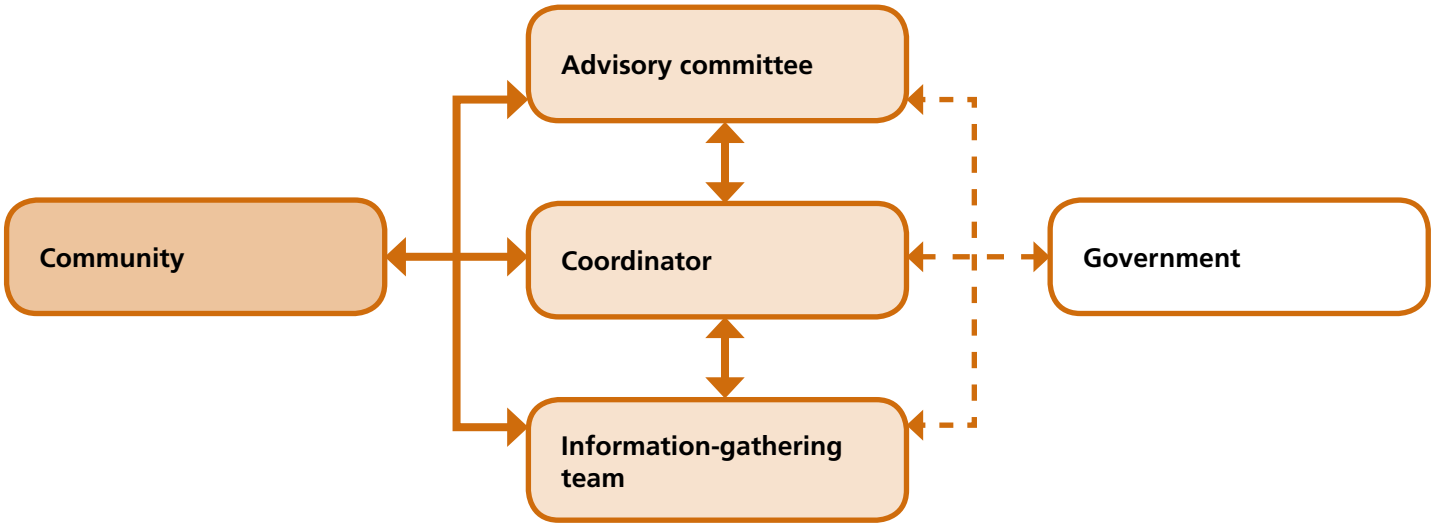
A community is a group of people having a long-standing social organization that binds them together, whether in a defined area or otherwise.

Creating a community protocol team

Various types of expertise are needed to create a community protocol. Most obviously, it requires the local knowledge and expertise of the community itself. But it also requires expertise in legal issues, government, economic development, community organizing, etc. that the community is not likely to possess.

Figure 5 shows one way of organizing a team to create a community protocol. This consists of an advisory committee and a local team to gather and analyse information, with a coordinator to manage the process.

The **advisory committee** includes specialists with various types of expertise, along with leaders of the community. Its task is to guide the development of the community protocol, build links with the community and gain their approval for the process, and advise on topics such as the legal framework, economic and social development opportunities, and the potential uses of the community protocol.



It may be difficult to bring the advisory committee together in one place. This may not matter: you can use a combination of face-to-face meetings with individuals or small groups and electronic media to keep in touch with them.

The **information-gathering team** consists of people who interview community members, conduct participatory appraisals and perform specialist functions such as recording video footage, identifying medicinal plants or characterizing the breed. The size of the team will depend on the circumstances. Small teams may not have the breadth of skills needed; large teams may be hard to coordinate. The team will probably consist of 3–5 people. The same group (or a subset of them) should analyse the information and write it up.

Community members may be members of the team: they can act as key informants, identify people to gather information from, facilitate contacts, organize meetings, act as interpreters, conduct interviews and help analyse and write up the findings.

Consider the following types of people as team members:

- Government representative (if mandate from government).
- People from the community organizations or nongovernment organization who have experience in working with local communities.
- Local people, including women.
- Volunteers from national and international organizations.
- Technical support agencies (conservation, tribal affairs etc.), community workers.
- Teachers and students.

At least some of the team members should have experience with the community and know the local area, and be known and trusted by community members. They should have experience with community organizing, an understanding of livestock systems, and speak the local language.

If a large area or community is to be covered, it may be necessary to have several information-gathering teams.

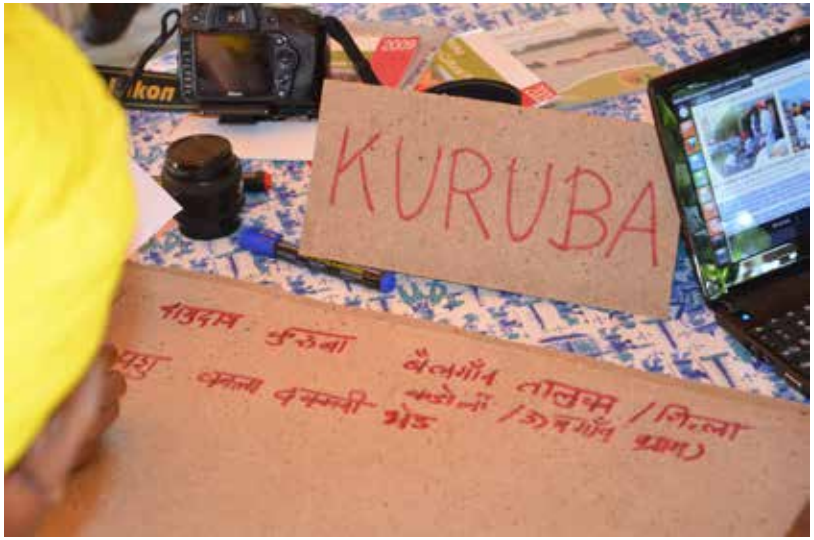
The **coordinator** is the most important person in the team. He or she coordinates the team, may conduct most or all the interviews or information-gathering exercises, and coordinates the analysis and writing. He or she is also a member of the advisory group, and maintains contacts with the organizations funding the community protocol project.

Funding for community protocols

Funding for producing a community protocol may come from various sources:

- International and national nongovernment organizations
- Donor organizations
- The community itself (often in kind)
- Research organizations
- The national or local government
- International organizations, such as the Global Environment Facility or the Food and Agriculture Organization of the United Nations.

7 How to compile a community protocol



Making notes for a discussion at a session to plan a community protocol for the Kuruba shepherds of Karnataka. Sadri, Rajasthan

There is no standard way of compiling a community protocol. This chapter contains some steps and suggestions that you can use as guidelines. But feel free to change and adapt the process to suit your own situation.

The ten steps are as follows. The individual steps may overlap, or may occur in a different order. It may be necessary to repeat certain activities – for example to check information or revise the draft.

1. Identify the community and breed, conduct desk research
2. Create a team
3. Approach the community, scope the situation
4. Identify informants, gather information
5. Write a draft
6. Get legal advice
7. Validate the draft
8. Finalize and translate the draft
9. Print
10. Use the protocol.

Box 6. Preparing the Ankole Longhorn cattle breed description

The Ankole Longhorn is a breed of cattle in Uganda and neighbouring countries in East Africa. They were traditionally kept by the Bahima people. Today, other communities also keep them. Elizabeth Katushabe, a cattle-raiser and activist who herself keeps Ankole cattle, documented the breed through a series of workshops. While the resulting document (Herders of Nyabushozi 2009) is not a community protocol, it illustrates many of the techniques used to create one (Box 6).

This document is not a full community protocol because:

- It involved only a few people in a small area, not the community as a whole. It does not reflect the claims of the Bahima people as a whole, and it did not seek their approval.
- It does not contain any information on laws.

Elizabeth Katushabe tells the story.

* * *

"This idea was triggered after I participated in a workshop on the importance of *in situ* conservation of indigenous breeds and thus biodiversity. I realized that our breed would sooner get extinct due to indiscriminate cross breeding with the Holstein Friesian breed aimed at high milk production. I therefore thought I could use the documentation to sensitize the herders and policymakers about the need to conserve the Ankole Longhorn cattle breed due to its several values.

We used the LIFE method of documenting indigenous animal genetic resources. We held discussions held with people from Nyabushozi (an area with cattle-keeping communities) about their views on the future and the need for the conservation of their Ankole Longhorn cattle. The participants included herders, veterinarians, researchers, conservationists and other stakeholders. Of the 184 participants, 68 were women or girls.

Planning

The first step was to consult with the people who had the knowledge about the LIFE method of documenting breeds. I collected research papers and other literature on Ankole longhorn cattle. I then visited the National Animal Genetic Resources Centre and Databank and got research data about the values of the breed (the milk has high butterfat content, the meat is low in cholesterol, and the long horns are used to cool the body in the tropical heat).

I used this to back up my argument for the need to protect this breed even if it did not produce a lot of milk. University researchers confirmed what the Bahima told us about the Lake Mburo National Park being the best traditional grazing rangeland for their cattle. We visited government farms for Ankole cattle (the Nshara and Ruhengyere ranches). This helped us to appreciate the government's efforts to conserve the breed. But we concluded that the most sustainable way to conserve the breed is by the herders themselves.

We visited two subcounty elected leaders, to introduce the idea and to get to know the people who still rear the cattle (many have crossbred the Ankole Longhorn cattle with the Holstein Friesian breed). We identified people to support with data collection (they were from the community and could speak the local language, Runyankore). With support of the LIFE Network members, we then de-

veloped guiding questions that were to be used to collect information (these were translated into Runyankore).

Participatory information-gathering

We organized two consultative meetings (with a total of 70 people) at Sanga subcounty (herders, opinion leaders) this was done on two different days. The people were divided into three focus groups in the mornings, with a leader chosen to guide the process. In the afternoon, we came back to the plenary and shared what each group had come up with.

On the third day, we visited Lake Mburo Senior Secondary School (in the study area) and discussed with students aged 13 and above (senior 1 up to senior 6 level) and their teachers. The meeting at the school aimed to sensitize the young people about the importance of conserving the Ankole breed. We believe that for the future of the breed, young people should be involved in any activity. Ninety-one students and five teachers attended this meeting.

We conducted individual interviews with 22 opinion leaders, spiritual leaders and other people at their homes or workplaces.

Data analysis and writing

I compiled the data from the different people and engaged a professional to lay out the document, I edited the English version. Then I translated it into Runyankore. Another person edited it again.

Validation

We organized a meeting of 20 people (some of whom were literate). One young man took us through the Runyankore version. We discussed each sentence and there were additions and deletions accordingly. After that I made the final corrections and the publication was printed in both languages.

Dissemination

We launched the document at a meeting of Ankole cattle keepers, local leaders, the local radio station and newspaper, LIFE network members, PENHA staff, the National Animal Genetic Resources Centre and Databank, and managers of government farms.

Whenever we visit an office, during conferences, or if someone visits the PENHA office, we give them copies of the document. We have uploaded it on different websites and shared with different networks."

More information: Elizabeth Katushabe, *www.penhanetwork.org, elizabethkatushabe@yahoo.com*

1. Identify the community and breed, conduct desk research

The stimulus to develop a community protocol may come from various sources:

- Concern about a problem, such as the loss of grazing rights.
- A commercial opportunity, such as an enquiry from a company about access and benefit-sharing.
- A mandate, in countries where a government body is mandated to manage access and benefit-sharing.
- A desire to empower the community.

In some situations, the identity of the **community** may already be clear. But this is not always the case. For example, if a company applies for access to the genetic resources of a breed, which "community" should be approached? Should the community be defined narrowly (the people living in a particular village who keep this type of animal), or broadly (all people who keep this particular breed)?

Similar problems may beset the identity of the **breed**. Some breeds are well-defined and officially recognized. Others are less well-defined and lack official recognition. This is often the case for breeds kept by pastoralists, for example.

Conduct desk research to find out all you can about the community, breed and area, ecosystem, production system and history. See Chapter 9 for ideas on topics and how to structure the information.

Potential sources include the scientific literature, government documents, census data and statistics, project reports, and documents produced by nongovernment organizations. For the breed, information may be available in FAO's Domestic Animal Diversity Information System (DAD-IS, fao.org/dad-is/en/). Conduct a thorough internet search, but remember that much of the information may not be online but be buried in offices, file drawers and library shelves.

Things to consider

- The community may not be uniform, or in agreement with itself. See Chapter 6 for more.
- Policies, official documents, statistics and research have often neglected local breeds and have been biased against small-scale livestock keeping and mobile pastoralism. Information may be unreliable, misleading, or fail to reflect the views of the livestock-keeping community. Statistics may under-represent the status of a local breed, or ignore it altogether. Documents may reflect policies that try to persuade or force pastoralists to give up their mobile lifestyle.
- Make sure that the community protocol reflects what the community says, not what outsiders say. Information from desk research should provide useful background, but not be at the forefront of the community protocol. Make sure you check the information gathered through desk research on the ground and with the community.

- Information based on desk research may be written in technical language that the community does not understand. It may be necessary to translate this first into simpler words (or the community's own language) in order to check it with them.

- Desk research is not confined to the initial stage of compiling a community protocol. It may be necessary to return to it at various stages during the information-gathering, analysis and writing.

2. Create a team

If your own organization cannot compile the community protocol, it will be necessary to find one that can. Possibilities include a community organization, an NGO with an interest and expertise in livestock or in community organizing, or a research or educational organization (such as a local university), an individual with the appropriate skills who can coordinate the work, or a government agency.

The organization or individual should form an advisory committee and a team to gather information. See Chapter 6 for details.

Things to consider

- The organization or individual should be familiar with the local area, people and language, and should be able to take on the community's perspective and represent its interests. They should have interest and commitment to the community and breed.

- It may be necessary to train team members in information-gathering techniques. See Chapter 8 for details.

3. Approach the community, scope the situation

If you have not already done so, approach the community leaders to explore their interest in creating a community protocol.

Many communities are organized in some way – through a clan structure, chiefs, religious leaders, a council of elders, or even a formal organization with elected representatives. It is best to approach the community through these structures in order to gain their support and to avoid confusion. The local government or an NGO active in the area may be able to provide introductions.

Explain what a community protocol is and why it is in the community's interest to produce one. Explain how the process works and what will be needed. If possible, show examples of community protocols produced by other communities and explain how they have helped the communities in question.

Ask the community leaders for their support in producing the community protocol and explain how they can help.

If appropriate, ask the leaders to organize a meeting with the community members so you can introduce the idea of community protocols to them, explain to them what you plan to do, and ask for their support.

Things to consider

- Compiling a community protocol may go very quickly, especially if you already have a good relationship with the community. But it may also take a long time. You may need to build up trust with the community and get the right introductions. The community itself must be ready: do not start the process in the wrong season, or in a time of crisis when people have other things to think about.

- Communities may contain different factions and interests. Individual leaders may be accepted or rejected by different groups. Be aware of power relationships within the community (and between the community and the local government, for example). Try to avoid being associated too much with any one group.

- The concepts behind a community protocol (including the name "community protocol" itself) are technical and may be confusing. Be ready to explain to the community leaders, and the community members, in simple terms what they mean and how the community can benefit.

4. Identify informants, gather information

Information for the community protocol is likely to come from two main sources within the community:

- A broad group of **community members** who keep animals or have an interest in them.

- A smaller group of **key informants** who have in-depth or specialist knowledge. Some of the key informants may themselves be members of the information-gathering team. Such key informants would include those breeders who are known and respected for the quality of their animals and who are both knowledgeable and passionate.

Community members

You will need a cross-section of the community – men and women, young and old, rich and poor, livestock keepers, processors and traders. Make sure that they are representative of the whole community of livestock keepers that you have identified – not just from one subclan, village or area. You may need to replicate the information gathering process in several locations to ensure that you have covered the whole community.

If the community is already organized, then work with and through that organization. But be careful: some community organizations represent the interests of just some of the members of the community – often older, better-off men.

Roles within the community may vary considerably by age, gender, wealth and location. Different people have different types of knowledge, opinions and priorities. For example, an older man may be concerned about where to graze a mobile herd, and whether to buy or sell animals. A woman may be interested in milk production and animal health. A young man may put emphasis on acquiring enough animals to pay for a dowry.

It is particularly important to include women, and to make sure they are heard (Box 7). This can be done in a number of ways: by making sure they are invited to meetings, holding meetings at times and places convenient for them, holding separate discussions for women, allocating time during meetings to listening to their opinions, and having women members of the information-gathering team interview them.

Key informants

Key informants are people who have special skills or knowledge about the community, breed or production system. They may include specialists on breeding, indigenous healers, record keepers, chiefs, religious leaders, traders, and the leaders of community organizations.

You can identify potential key informants in various ways:

- Ask around for breeders who are recognized as having the best herds and who have a passion for breeding.
- Ask the community leaders to identify them.
- Ask community members to name people who know a lot about a particular topic.
- Check with other organizations that have worked with the community.

Knowledgeable people from outside the community may also be key informants. Examples include veterinarians, extension personnel, government officials and NGO staff. Some of these may be members of the advisory committee.

Information-gathering methods

Various methods exist (see Chapter 8). The most appropriate methods will depend on the situation. Using a combination of methods allows you to compare the findings with each other. If they agree, you can be reasonably confident that the information is reliable. If they do not agree, you may have to go back to check the discrepancy.

Using a range of methods also allows you to explore interesting aspects. A survey, for example, may raise questions that you can then study in more depth with key informants or through focus groups. Similarly, a focus-group discussion may help you formulate questions to include in a survey or semi-structured interview.

Box 7 Involving women in compiling protocols

Most existing community protocols have been developed by men, with women having hardly any visible inputs. This gender bias is evident from the photographs documenting the processes – which show only, or predominantly, men. Current community protocols thus present the male perspective on the issues.

One notable exception was Dailibai Raika, a woman leader from Rajasthan, India, who presented the Raika protocol first to African indigenous people and then to a working group on the UN Convention on Biological Diversity in Montreal.

Nevertheless, two of the protocols (Pashtun and Samburu) point out that it is usually women who are in charge of veterinary treatment.

Types of information to gather

See Chapter 9 to understand what the protocol should contain.

There is no set format for a community protocol, so each one will be different, depending on the situation and the interests and priorities of the community.

Things to consider

- Ask the people to use their own words to describe the community, breed, area and production system. Remember: this is the community's own protocol – not a scientific document about the community or breed.

- Many factors may prevent people from talking. They may be reluctant to speak or express themselves in public. They may not want to divulge information to outsiders (so it is important to win their trust). After years of being taught that outsiders' knowledge is superior, they may not value their own traditional knowledge. They may have little education or be illiterate, so be unable to read or write.

5. Write a draft

Once the team has collected the initial set of information, it is time to do some initial analysis. Sort the information into categories (see Chapter 9 for a suggestion). Compare the information you have gathered from the community with the findings from desk research and other key informants. Identify any gaps, disagreements, areas that need to be clarified, and aspects that need to be explored further.

If necessary, go back to the community (or to individual key informants) to check and resolve outstanding issues, and to gather any additional information needed. Consult with the team members and the advisory group as required.

Write a first draft of the community protocol. This may be in the national language so it can gain a wide readership within the country. If the community uses a different language, prepare a translation into their own language so they can understand it.

Things to consider

- The text must reflect the voice and terminology of the local people. Avoid scientific terms and jargon. Give priority to the community members' views and the information they have provided, rather than any secondary information collected.

- The final text of the community protocol must bridge the gap between the style of language that the community uses and a style that is precise enough to be credible technically and legally. This is difficult to achieve. Consider asking an editor to help find the right level of language to use. It is better to get the draft edited at this stage in order to avoid major editorial changes later.

- You may have to go through several drafts before the protocol is ready to be validated.

6. Get legal advice

The advisory group (see Chapter 6) should already include someone with legal expertise. If it does not, you will need to find a lawyer who knows about the laws on biodiversity conservation, community rights, common property resources and dispute resolution. Get his or her advice on the national legal framework and the laws that are relevant to the content of the protocol. Note the relevant sections of these laws and quote them in the *Claims and demands* and *Laws* sections of the protocol. Ask the lawyer to help write these sections.

Things to consider

- Find out which treaties and laws may be relevant for the community.
- Find out which government body (or bodies) are relevant – both those that implement the law and those that might change the law or how it is implemented.
- Find out what other organizations or individuals may be able to support the community in legal matters.
- Start thinking about the type of approach the community might take to defend or claim rights: legal (through the courts), political (lobbying policymakers) or public opinion, or some combination of these (see Chapter 5).

7. Validate the draft

Once the draft is ready, it is ready to be checked. It should be validated at four levels: community, technical, legal and government. This is best done by a group of people with the required backgrounds. The advisory committee, perhaps with additional individuals, may be appropriate for this.

- **Community** Leaders and other representatives of the community should check that the document reflects the knowledge, opinions and priorities of the community. If possible, call a meeting (or meetings) with a wider group of people in the community to get their feedback on the draft.
- **Technical** Invite scientists, technicians, NGO staff and others to check the the draft.
- **Legal** Ask the lawyer to check that the legal sections are appropriate and contain information that will be useful in pressing for legal and policy changes.
- **Government** Submit the draft to selected local and national government officials and ask for their inputs. It is important to inform them and get their support for the claims in the protocol.

Things to consider

- It may be necessary to go back and forth several times before you get agreement on the draft.
- Not everyone may agree on the contents. For example, the government may not accept

that the community claims certain rights. Remember that this is a community document: it should represent the community's opinion, not that of the government or of technicians.

8. Finalize and translate the draft

Incorporate any changes in the draft. If necessary double-check them with the relevant individuals.

Make sure that the community protocol uses terms that make sense to local people. Feel free to use local terms for vegetation, rituals, practices, etc., but make sure you also translate them into words that other readers will understand. For example, give the botanical names for plants as well as the local ones.

Include photographs of the community, the location and animals. Create simple graphics and maps to show the livestock status and trends. If you used participatory appraisals to gather information, consider including the diagrams that have been generated in the document.

Things to consider

- Consider making two or more versions of the community protocol:
  - A full version for the outside audience.
  - A shorter, simpler version for widespread distribution within the community.
  - Versions in other formats – such as a video or slide presentation.
- You may have to produce these documents in multiple languages: the community's language, the national language, and an international language such as English, French or Spanish, so it can be deposited with international organizations.

9. Print

Get a professional to design and lay out the community protocol. Give it a final proofread before it is printed.

Work out how many printed copies you will need. Make a list of the people and organizations you want to receive a printed copy. Get the names and addresses of key policymakers and government officials, donors and NGOs whose support you need or whom you want to influence. Make sure to include enough copies for the community members – especially those who helped compile the document. It is better to have too many copies than too few (though you can always reprint if you do not have enough).

Produce the document in electronic form (PDF is the most usual format) for distribution via email and the internet.

10. Use the protocol

See Chapter 10 for ideas on how to use the community protocol.

8 Gathering information, analysing and writing

Members of the Raika community discuss their community protocol

This chapter outlines various methods the team can use to gather information from local people to include in the community protocol.

In all these methods, a participatory approach is vital. The information-gathering is supposed to be **by** and **for** the community, and not just **about** them. Make sure the community is helping to guide the process and is contributing the information that they feel is important and relevant to their lives. Listen to what they say and ask for their advice. Emphasize that the work is for them and that the community protocol is a document that will help them.

Gathering information

Participatory appraisals

A participatory appraisal consists of a series of exercises performed with a cross-section of community members. Each exercise focuses on a specific topic, such as the daily routine, activities throughout the year, or the location of grazing and water points. Each exercise involves a group of community members; they draw diagrams or fill in matrices under the guidance of a team member who facilitates the process. Each exercise may take one to several hours to complete.

Table 4 Participatory appraisal exercises useful for a community protocol

Section of community protocol	Exercise	Topic
The community	Historical timeline	Events and changes over time, e.g., history of the community, drought, legislation
	Breeding community map	Relationships within the breeding community (the network of people who exchange or borrow animals)
The livestock breed	Breed description	Listing of the characteristics and behaviour of the breed
The area	Resource map	Location of grazing, water, housing, boundaries, daily movements, migration routes, breeding area, markets, etc.
The production system	Seasonal calendar	Rainfall, feed availability, location of herd, health problems, breeding, marketing, timing of activities
	Gender analysis	Gender division of labour, functions
	Daily schedule	Who does what at different times of day
	Farm sketch	Map of the farm showing pastures, crops, livestock types and housing, water sources
	Resource-flow diagram	How the community uses resources such as grazing, water, manure and draught
	Stakeholder map	Which organizations affect the production system
	Value chain diagram	Who is involved in producing, buying and selling livestock and livestock products
Threats, claims and demands	Brainstorming	List of problems and threats List of potential solutions List of claims and demands
	SWOT analysis	List of strengths, weaknesses, opportunities, threats
	Problem–solution tree	Problems the community faces, their causes and possible solutions
	Matrix ranking	Problems or threats in order of importance to the community Claims and demands in order of importance

Participatory appraisal techniques are commonly used by NGOs (though less commonly by government or research organizations). A wide variety of exercises exists; you can adapt them to suit your situation, and create new exercises to gather specific types of information. Table 3 gives some suggestions for exercises that can be used to generate information for each section in the community protocol.

Observe and question

If you are not yet familiar with the local people's livestock management, spend time listening, looking and asking questions. Visit them in the field or at work, and consciously observe what they do. Make notes, ask questions, and get them to explain their actions and why they do things a particular way. Try to cover all aspects of the production system: breeding, feeding, milking, health care, movements, marketing, etc. Visit several livestock keepers in different situations so you can compare them.

Semi-structured interviews

Semi-structured interviews use a set of open-ended questions to gather information from individuals, a couple, a household or small group of people. Work out beforehand what questions you want to ask, but feel free to vary the order and content of the questions as you go along. This allows you to explore topics that are interesting or significant. Take notes (or have someone else take notes for you) while to engage the respondent in an informal conversation.

Semi-structured interviews are more flexible and useful for community protocols than formal survey interviews, which have a set number of closed-ended questions and multiple-choice responses.

Key informants

Key informants are people with special knowledge or skills (see Step 4 in Chapter 7). They may be members of the information-gathering team.

You can gather information from key informants through one or more semi-structured interviews. If you are working with them closely, you will learn from them continuously. Make notes as you go along so you do not forget important points.

Key informants can help arrange meetings and interviews, build trust with community members, and identify other individuals with particular areas of expertise. They can also be invaluable in explaining the results of the other information-gathering methods.

Focus-group discussions

A focus-group discussion is a small group (3–8 people) with more-or-less equal status who discuss a particular topic under the guidance of a team member. A second team member takes notes.

Before the discussion, prepare a question guide with a list of themes to discuss. Introduce the subject, explain what you are doing, and then ask them to talk about the first theme. Guide the conversation, and ask questions. Then move to the second theme, and so on. Feel free to explore

topics that crop up and that participants feel are important.

Hold several focus groups in different locations for different groups. Arrange separate groups for people with different status or specializations, such as men, women and young people.

Don't use focus group discussions with groups that might mistrust or compete with each other, such as rival groups of community members, traders (who compete with each other for business), or a mixed group of government officials and farmers, or (in some cultures) a group of men and women. For such people, separate focus groups or individual semi-structured interviews are better.

Audiovisuals

A community protocol can (and should be as far as possible be) supplemented with audiovisual materials: photographs or audio and video recordings. Indeed, a community protocol does not have to be printed at all – it can consist entirely of audiovisual materials.

Photographs are vital in a printed community protocol. Make sure you get photographs of the people (but get their permission to include them in the protocol), animals, management system, the surrounding area, etc. Choose the best photos to include in the document.

Collect audio and video footage to support the protocol. Examples of the type of footage that may be useful:

- Interviews with livestock keepers, key informants, community leaders and supporters (such as NGO leaders or government officials).
- Shots of the animals: both close-up to show their traits, and wider shots showing them in the environment.
- Shots of people taking care of or working with the animals: herding, milking, feeding, treating diseases, etc.
- Other topics, such as medicinal plants and cultural activities.
- Shots of the community protocol process: interviews, group discussions, participatory appraisal exercises, etc.

You can use audio or video clips in various ways:

- You can embed short video or audio clips in slide presentations.
- You can embed clips in an online document (upload them to a video sharing service such as YouTube, then put the links in the document).
- You can edit the clips into a single podcast for access online or use in presentations.

Technical information

You may be able to collect certain types of information directly. Ask dairies for information on milk yields and milk fat percentage. Check with the local abattoir on carcass weights and dressing percentages. If you have the equipment, you may be

able to measure live weight, milk yield and milk fat percentage yourself.

This type of technical information is not necessary for a community protocol! If you can get it, fine. If not, then do not feel it is necessary.

Secondary data

Secondary data usually come from printed sources: government documents, legal documents, census data, surveys, reports, etc. You will have found much of this during your desk research (see Chapter 7, Step 1). Look for additional material that may be relevant. Check especially with key informants, local government officials, academics and NGO staff.

Analysing

You will collect a lot of notes during the information-gathering phase – probably written by different team members. How can you summarize these into a reasonably brief document? Here are some ideas.

Familiarizing

Read through all the notes to familiarize yourself with the information. Make additional notes of any thoughts that come to your mind. For the notes from each meeting or focus group discussion, write a brief summary stating what was discussed and any key points.

Adding keywords

Think of the keywords or categories of information you will need for the community protocol. Some of these will come from the structure of the community protocol itself: "Community", "Area", "Breed", "Feeding", "Health", etc. Others may be more detailed or emerge from your reading of the notes, such as "History" or "Grazing problems".

Write the keywords in the appropriate places in the notes to show what theme is covered where. You can write the keywords in the margins of the notes (use a coloured pen so they stand out), or write them on sticky notes and attach them in the appropriate place.

If you have used a computer to take the notes, you can add headings or comments to the text. You can also use special note-taking software to do the same job.

Collating

For each category, choose the largest or most complete set of notes (this will probably come from one of the key informants). Read through it again to make sure you understand it, then use this as a basis to write text to go into the community protocol. Go through the other notes that have the same keyword and enrich the text accordingly. Watch out for instances where two sources disagree with each other: you may have to check back with the sources to reconcile such disagreements.

Sorting

Alternatively, you can cut the sheets of paper with your notes into sections, one for each category or keyword. If you do this, write a code on each snippet to show where or who the information came from. You can then sort the snippets into categories, and then put the categories into a logical order so they will fit into the structure of the community protocol (see Chapter 9).

Analysing and explaining

Some sections of the community protocol (such as a description of the breed) should be fairly straightforward. Other sections may require more analysis. You may have to build links between different statements and pieces of evidence – for example between information about migration and the location of water points. You may have to compare and draw conclusions from contradictory opinions, for example if the community members and government officials disagree. You may have to explain cause-and-effect relationships, for example to explain how a law affects the community. You may have to draw on secondary information (such as published statistics) to support (or refute) statements.

Visualizing

Think of ways to make points in a visual way in the community protocol. Some suggestions:

Photographs Photos may be decorative, or (better) informative, or (ideally) both. Choose photographs that help carry the message in the text: such as the characteristics of the animal, the nature of the environment, the management system, the relationship between the community and the animals. Provide a caption that explains what is in the photo. Avoid photos that do not carry a message, or that merely show a group of people looking at the camera (have the people do something instead). Give the name of the photographer, the names of the people in the photo, and the location. See the section on *Audiovisuals* above for more information.

Maps Use these to show locations, movements, resources, markets, etc. You can use official maps, online maps, satellite images such as Google Earth, or maps generated through the participatory appraisal process.

Diagrams Use these to show other types of relationships. Again, they may come from the diagrams generated through the participatory appraisal, or you may create new diagrams to depict insights gained from your analysis of the information.

Graphs If you have quantitative information, consider displaying it as a graph rather than as a table. Possible forms include pie charts, line graphs and bar charts. You can use a spreadsheet program such as Microsoft Excel to create graphs easily.

Writing

Drafting by an individual

The approach to analysing described above is suitable for an individual who summarizes the information gathered and drafts a text. It can also be adapted if the text is drafted by a small group or through a writeshop (see below).

Drafting by small team

Once the information has been gathered, bring together a small team to work on the draft together. Choose people with the right skills (familiarity with the subject-matter, language ability, computer skills). This is likely to be the information-gathering team plus some of the key informants and advisory committee members.

Divide up the chapters of the community protocol and allocate them to individuals to work on. Give them a deadline to submit their drafts. Then edit the drafts into a coherent whole.

Writeshop

A writeshop is a workshop where the participants write a document. It is faster and more efficient than drafting by a small team. Bring the team together, explain the writeshop process, and give them an outline of the planned community protocol. Allocate each chapter to one or more people to work on. Give them a few hours to draft the text, then bring them together to present their drafts to the other participants. The participants comment on and critique each draft in turn. The authors then go back and rework their draft.

Using this method, it is possible to produce a reasonably complete draft of a community protocol within a few days – if all necessary information has been collected previously.

9 Contents of a community protocol

This chapter gives a possible outline of a community protocol, based on Figure 1 in Chapter 3. Because community protocols are produced by communities themselves and cover a wide range of topics, they may vary considerably. The order and length of the sections may vary. Feel free to adapt the outline below to suit the needs of the community.

You can use the blank spaces in this chapter to make notes for your own community protocol.

1 Introduction

Give the **name of the community** and where it is located.

Name the species and **breed** (or breeds) it maintains.

Give the **purpose** of the community protocol.

Banni buffalo breeders explain their community protocol

2 The community

Define and describe the **community**, its distinctive characteristics, language and ethnicity (as appropriate).

Describe the community's **history** (including myths and beliefs).

Describe its customary leadership and traditional **organizations**.

Describe important **cultural practices**, such as migration patterns and customary laws.

Compiling the Samburu community protocol

3 The area

Describe the **area** where the community live: its location, landscape, climate, vegetation and soils.

Explain **how long** the community has lived in the area.

Describe **features** such as grazing areas, water sources, locations of mineral licks.

Describe the **land** ownership and access, the size of landholdings, and restrictions on grazing and movement, such as fenced land or nature reserves.

Describe the **farming system**: the types of crops and cropping patterns, and how this relates to the livestock (as a source of feed, use of manure as fertilizer, use of crop stubble, etc.).

Give a **map** showing important locations.

If the community **migrates** from place to place, describe the key locations and migration routes. Explain the timing and reasons for migration.

Describe any **changes** in the vegetation or the environment that have occurred over the years.

Camels grazing natural vegetation in Rajasthan

Box 8 DAD-IS descriptors

FAO's Domestic Animal Diversity Information system (DAD-IS) contains a set of scientific descriptors of breeds. This information may be useful to complement the community's description of a particular breed.

If information on the breed is already included in DAD-IS, you can check it for accuracy. If it is not yet included in DAD-IS, or if the information is incomplete, you can collect it as part of the information-gathering stage of the community protocol. You can submit the information to DAD-IS through the national coordinator, *www.fao.org/dad-is/national-coordinators/en/*

Below is a summary of the types of information included in DAD-IS. The community may not have some of the more technical information (such as on dressing percentage or milk fat content). And DAD-IS does not have space for aspects that the community may think important – such as origin myths and the community's ties to the breed. So do not be limited by the information that DAD-IS requires.

Much of this information (especially in items 4, 5 and 6 below) can get very technical. Include them if they are easily available (for example, from a scientific study), but they are certainly not mandatory for a community protocol.

For a community protocol, do not just copy the information from DAD-IS or from scientific studies. A community protocol is produced by the community, not by outsiders! What is important is to capture the community's ideas and perceptions of the strengths and advantages of their breed, expressed in the community's own terminology.

Summary of DAD-IS data types

1. **Local names**, other names
2. **Uses** (e.g., milk, meat, draught, wool)
3. **Origin and development**
4. Description of what an **ideal animal** of the breed looks like (its "morphology")
   - Size and weight of males and females
   - Colour (skin, hide, wool, patterns)
   - Horns (males, females)
5. **Performance**
   - Birthing, number of offspring, seasonality of breeding, age of breeding animals, birth weight, age at maturity
   - Weight gain, length of productive life, carcass weight, dressing percentage
   - Milk yield, lactation length, milk fat, milk protein, milk per day, number of lactations
6. **Specific characteristics**
   - Product characteristics (e.g., meat, milk, cheese)
   - Resistance or tolerance (e.g., disease, drought)
   - Adaptability to a specific environment (e.g., cold, heat, steep terrain)
   - Reproductive characteristics (e.g., prolific)
   - Other special qualities (e.g., behaviour, docility)
7. **Management conditions**
   - Management system
   - Feeding of adults
   - Mobility
8. **Population**
   - Number of animals
   - Number of breeding males and females
   - Population trend
   - Number of herds
   - Herd size
   - Distribution
9. **Organizations**
   - Breeding organizations
   - Conservation organizations

Adapted from FAO DAD-IS, *www.fao.org/dad-is/browse-by-country-and-species/en/*

4 The livestock breed

Give the breed's **local name** and any names in other areas or languages (1 in Box 8).

Give **population** figures and trends (8 in Box 8), if available. Official statistics may have this information but are often incorrect. Have the number of animals changed over time, in terms of total numbers, the average herd size, and the quality and types of animals?

List the main **uses** of the breed (2 in Box 8).

Describe the breed's **origin** and history (including any myths) (3 in Box 8).

Describe the breed's **physical characteristics**: its size, colour, horns, wool, horns, etc., including any local names for these characteristics or types of animals (4 in Box 8). Include any preferences for a certain size, colour or type of animal.

Describe its **performance characteristics**: reproduction, weight gain and milk yield (5 in Box 8). You may be able to get some of this information from dairies and abattoirs.

Detail any **specific characteristics** (6 in Box 8). What is special about this breed? What distinguishes it from others kept in the same or neighbouring areas, or from high-performance breeds? What are its particular strengths and weaknesses?

Describe any **behaviour** and **skills** that the animals have. For example, in their choice of forage, drought tolerance, behaviour in migrating, attachment to their owner or a particular area, their ability to defend their young, negotiate difficult terrain, climb trees, or walk long distances.

The Dangi cattle breed in Maharashtra, India

5 Institutions

Describe the **beliefs** and **rituals** that are associated with the animals: religious ceremonies, cultural events such as fairs and races, superstitions associated with the animals.

Describe how animals are shared or **exchanged** within the community: lending of breeding animals, loaning of animals to poorer relatives, gifts and dowries, etc. to build and maintain social relationships.

Explain how **young** people come to manage and own animals. How do they learn the skills? How do they acquire animals of their own? What makes young people desire to keep animals (or not)? What happens to them if they abandon the lifestyle?

Describe the community **institutions** and **cultural practices** that regulate herd management and breeding, such as elders' councils, breeding societies, committees that negotiate over grazing rights, and community organizations that interact with the government.

Describe any **conservation** efforts for the breed. Are local people interested in maintaining the breed for livelihood reasons, identity or culture? What existing local institutions could be mobilized to help maintain the breed? What are the constraints? What types of action do respected local people and other community members suggest?

Cattle are often used in religious festivals

6 Management practices

Describe the **management system**. Sedentary or mobile, or a combination? A single herd, or groups of different types of animals?

Describe the **herd composition**: the size, number and types of animals in each herd, and where they are kept.

Describe any **seasonal movements**. Describe the routes and methods, the reasons for the movements (grazing, marketing), and the animals' condition at each time of year. How are the movements coordinated? What are the destinations (grazing reserves, water points, salt licks, etc.)? Who manages the movements?

For each type of animal (males, females, milking animals, young), describe the **daily schedule**, and the reasons for this schedule – for herding, milking, penning, etc. Who does what – men, women, children?

Describe the **housing** or penning, feeding, watering and waste disposal.

Describe any **equipment** or machinery used, and any working animals (dogs, horses) used to manage the herd or flock.

Explain any **changes** in how the animals are managed over the last few years.

Describe **who** (men, women, children) does what work: feeding, watering, herding, milking, health care, marketing, etc. Are there traditional roles for men and women? Who makes the decisions? Who controls the products (such as milk) or cash from sales?

Pastoralists' herds often rely on natural water sources

7 Grazing and feeding

Describe the **movement** pattern and different seasonal grazing areas.

Explain the **feeding** system used (grazing, stall-feeding) and the type of feed (forage, fresh fodder, hay, silage, concentrates, minerals).

Describe the types of **forage** the animals eat. Natural vegetation, cultivated, or crop residues? Identify the species (local and botanical names if possible). Which species do they prefer? Which plants are particularly good for them?

Describe any **grazing** practices, such as mobile pasturage, permanent pasture, fenced grazing, rotational grazing, tethering, confinement in a pen or stall.

Describe the types of **fodder** the animals are given. Where does it come from? Natural vegetation, cultivated or crop residues? How is it collected and stored? Identify the species (local and botanical names if possible).

Describe how the animals are **watered**: e.g., periodic herding to natural sources such as rivers or waterholes, use of wells or boreholes, provision of water in the field or pen.

Explain the **seasonal** differences in feeding and watering practices. What types of forage and fodder do the animals eat at different times of year? How are these managed?

Describe any **problems** with feeding and watering: e.g., the availability and quality of feed and water, shortages during drought, feeding and watering of ill animals.

Feeding goats with acacia pods in Tamil Nadu, India

8 Animal health

This section is optional in a community protocol.

- Describe what the community does to keep the animals generally **healthy** – e.g., feeding particular types of plants, providing mineral licks.
- List the main **medicinal plants** used (give local and scientific names if possible). Describe how they are used.
- Explain **who** in the community manages the animals' health. Are there traditional specialists who treat certain diseases?
- Describe how **pest** and **disease** problems and prevention and treatment methods have changed over time.

Drenching a cow in Lesotho with traditional medicine

9 Breeding

Explain how livestock keepers manage the **breeding** of the animals (Box 9). How do they identify or name individual animals? Do they select male and/or female animals? What are their breeding goals and objectives? How do they maintain the quality of the herd over time? Do they maintain separate lineages of animals within the herd?

List the **words** livestock keepers use to describe different types of animals (e.g., breeding bull/cow; heifer/cow, pregnant cow, newborn).

Describe how the livestock keepers maintain breeding **records**, such as memorizing progenies or keeping pedigree records.

Describe the **seasonal patterns** in breeding: when does breeding occur?

Describe the **changes** in the breeding system that have occurred over time. Have the livestock keepers changed the breed of animals they keep? Has the breed itself changed?

Describe the **problems** that the livestock keepers face in breeding their animals.

Soundaram Ramasamy, the "bull lady" in her village in Tirupur District, Tamil Nadu, keeps several Kangayam bulls to offer breeding services

Males

Explain any **selection criteria** and procedures for males for the purposes of reproduction. What traits does the livestock keeper look for?

Describe the methods used to prevent **unwanted breeding** by males: castration, aprons, separation of males from female animals, regular exchange of males, sale of males, etc.

Describe the methods used to **promote breeding** by desirable males: keeping of a community-owned male animal for breeding; exchange, borrowing or purchase of males; allowing females to mate with other breeds or with wild animals, etc.

Females

Explain any **selection criteria** and procedures for females for the purposes of reproduction. What traits does the livestock keeper look for?

Describe the methods used to prevent **unwanted breeding** by females: separation of males from female animals, sale of females, lending animals to poorer relatives, etc.

Describe the methods used to **promote breeding** by desirable females: exchange, borrowing or purchase of females, taboos on the sale of breeding females outside the community, etc.

Box 9 Breeding decisions

Breeding decisions are influenced by a hierarchy of factors: the environment, cultural restrictions, market requirements and personal preferences.

Indigenous breeders usually have a list of criteria they use to select animals for breeding. The Raika in India even have a catalogue of nine criteria (*nauguna*) they use to choose rams – although this concept is becoming forgotten. Criteria used in breeding decisions can be wide-ranging. They include:

Ability to put on fat and strength in the summer and autumn Mongolian herders usually retain for breeding those animals which are able to build up fat resources when pasture is abundant in summer and autumn. They reject animals that get thin during winter and spring.

Fertility Fertility is a major criterion for selection among Mongolian herders. Females that do not become pregnant when they are first mated, or dams that stay barren for two years, are eliminated.

Mothering qualities The Raika consider mothering qualities as very important in sheep.

Love of the owner and docility For many breeders, it is important that they feel the animal likes them and responds to its name. This can be a selection criterion in both male and female animals.

Growth Young animals must grow well to be selected for breeding.

Appearance In Mongolian animal husbandry, the animal's general appearance is important. Horses can be selected for speed based on their appearance, without actual racing trials being necessary.

Source: LPPS (1995)

10 Uses, products and markets

Describe how the animals are **used**: for milk, meat, offspring, wool, hides, draught, manure, rituals, etc.

Describe any **special characteristics** of these products or services: the special quality of the meat or milk, the suitability as draught animals, the use of offspring as breeding animals in crosses, etc.

Explain **who** uses the products and services: the livestock keepers themselves, other community members, other people (such as farmers who buy animals to pull carts and ploughs), traders who sell the products to others, etc.

Describe the **economic importance** of the animals for the community.

Describe how the animals or their products and services are **marketed**: directly to the customer, through traders, to dairies and abattoirs, etc. Which animals are sold from the herd? What products and services are sold? How are they processed into other products (butter, cheese, yarn, leather)?

Describe the **market**: where are the marketplaces, what is the demand, how does this change over the year? What problems are there in the market? Are there any restrictions or bans on the use or sale of animals, products of services?

Describe any **changes** in the market over time.

Local animal breeds are often the source of unique products

11 Threats and opportunities

Describe the main **threats to the community**: what prevents them from continuing their way of life? Loss of traditional institutions, lack of interest by young people, conflict, lack of health care and education opportunities, etc.

Describe the main **threats to the area** and the environment: what is damaging it? Deforestation, climate change, spread of cultivation, designation of nature reserves, changes in land ownership, etc.

Describe the main **threats to the breed** and production system: what is causing the numbers or quality of animals to decline? Lack of market demand, crossbreeding, promotion of exotic breeds, lack of veterinary services, etc.

List the **opportunities** for the community, area, breed, production system, products and marketing. How might the community take advantage of these opportunities? How can outsiders (especially the government) support them?

Cattle at a water hole in Mali

12 Claims and demands

This section is crucial: it is what distinguishes a community protocol from other types of document about the community or the breed.

State the **claims** made by the community over the **breed**. For example, state whether they claim to have developed the breed, and whether they claim control over how it may be used.

State the **claims** made by the community over the **area**. For example, their claims to access to traditional grazing areas and watering points, their use of migration routes, and their responsibility for maintaining the ecosystem.

State the **claims** made by the community over **traditional knowledge** relating to the breed. For example, their knowledge of breeding and herding techniques, medicinal plants, and specific products or designs.

Cattle in Mali traditionally graze on crop residues

13 Laws

Cite any relevant **international laws** and **treaties**, and point out that the government has signed and ratified them. If the government has not yet signed or ratified the treaty (or incorporated its provisions into national law), then the community protocol should urge it to do so. Include the full text and references of the relevant sections.

Cite any **national, sub-national and local laws** that support the livestock-keepers' claims.

Cite any policies, laws and regulations that are **objectionable** and need to be changed.

Explain any **customary laws** that are relevant to the situation.

National and international law can seem very remote and irrelevant to livestock keepers

10 Using a community protocol

Young Raika herders studying their community protocol

Once created, community protocols can be used in many different ways. This chapter describes some of these.

Audiences

A community protocol may interest a wide range of organizations and individuals.

The main target group will be the **competent government authority** that is tasked with implementing the Convention on Biological Diversity and the Nagoya Protocol on Access and Benefit Sharing. A community protocol is a legal document that must state claims and demands clearly to this authority.

A second major target is the **national coordinator on animal genetic resources**: the person named by the government to coordinate the national implementation of the Global Plan of Action for Animal Genetic Resources (Box 10) and the collection and reporting of information on animal breeds.

Other audiences include:

- **Government institutions** (national, local) concerned with livestock, biodiversity conservation, the environment, and local development; national and local politicians and people

who influence them, such as advisers and academics.

- **The community:** leaders, members and local institutions such as youth associations and women's groups, and the community organizations and NGOs that work with them. If they do not see how the community protocol can help them, they will not go to the trouble of producing it. Indeed, if they think that others will benefit more than they will, they will be reluctant to cooperate and may refuse to provide any information, or will provide false information.

- **Organizations interested in livestock breeds:** breeding societies, genetics companies.

- **National and international agencies concerned with biodiversity and traditional knowledge**, including universities, genebanks, researchers, and conservation organizations.

- **Organizations and individuals involved in livestock production and marketing:** livestock departments, veterinarians, traders, input suppliers, abattoirs, dairies.

- **Organizations focusing on local development:** development agencies, local, national and international NGOs, local government, development projects.

- **Organizations and individuals focusing on legal issues:** lawyers, NGOs, the patent office.

Box 10. The Global Plan of Action for Animal Genetic Resources

The Global Plan of Action for Animal Genetic Resources was agreed upon by all FAO member countries in Interlaken, Switzerland, in September 2007. It recognizes the role of pastoralists and other livestock keepers in the conservation and sustainable use of animal genetic resources.

Strategic priority 6 of the Global Plan of Action is to:

- Support indigenous and local production systems and associated knowledge systems of importance to the maintenance and sustainable use of animal genetic resources.

More information: FAO (2007a)

- **Research and educational organizations and libraries:** research institutes, universities (departments of livestock, social sciences, libraries), the national library, agricultural training institutes, local schools.

- **The media:** journalists focusing on local development issues and science.

Each of these audiences will be interested in the community protocol for its own reasons. Although their priorities may differ, there may be considerable commonality of interest among them.

You will need their mailing addresses (for printed copies) or email addresses (for electronic versions of the community protocol). You can compile a list of these using a spreadsheet or database program.

See Chapter 13 for a list of some of the international agencies and NGOs with an interest in community protocols.

Approaches

Identify your audiences

While you are planning the community protocol, and during the information-gathering process, think of who the audiences are and how you are going to use the resulting document. This will help guide the information-gathering process and the writing of the protocol.

Before you print the finished protocol, make a list of everyone who should get a copy. Check the list of suggested audiences above and add any relevant individuals or organizations (and delete those that do not apply). This will help you decide how many copies to print.

Identify your objectives

At the same time as identifying your audience, also identify the objectives of the community protocol. What should it try to achieve? What sorts of changed behaviour or policies do you (= does the community) hope for? How can the community protocol best achieve these objectives? You will probably have different objectives for each audience. For example, you may hope that:

- **Government** The government recognizes the community's rights to the use the area for grazing. The community protocol could contain the history of the community's use of the area and lay down a legal claim to continue using it.
- **Community** The community gets organized to maintain access to its traditional grazing lands, which have been designated as a protected area. The community protocol is a document they can use as a focus for organizing.
- **Youth** The community protocol may be the only document available that informs them about their heritage and traditional culture. This knowledge can become lost very quickly – within a single generation, people can forget about their herding history.
- **Environmental organizations** These accept that the community helps maintain the ecosystem of the area and can help protect it. The community protocol could give evidence that the community has helped create and maintain the current ecosystem, and could state the community's will to steward the environment.

Discuss these objectives with the community as part of the information-gathering process. The results of the discussion will also guide the content and writing of the document.

Work out your messages

These will depend on your audience and objectives. Some examples:

- **Government.** "The community needs the right to graze its animals in Area X, or the breed will become extinct."
- **Community.** "Use this document to fight for our rights."

- **Environmental organizations.** "The community is a vital steward of the environment in Area X."

Determine your communication strategy

For each audience, decide on the best way to use the community protocol to achieve the objectives. For example:

- **For the government**, you might consider lobbying the government, and organizing the community to put pressure on local officials and elected representatives. The community protocol will contain both the community's demands and references to the relevant laws and policies.
- **For the community**, you might consider a follow-up series of meetings to organize activities that the community can undertake, and work out how to use the community protocol to further its cause.
- **For environmental organizations**, possibilities include discussions with key individuals and field trips to the affected communities.

Launch

A high-profile event to launch the community protocol is a good way to attract the attention of the community, the government and other key audiences. The launch may be an independent event that you organize yourself, or it may be piggybacked on another event (such as a fair) where your key audience members will be present. Ask key individuals (community leaders, women members of the community, government officials, etc.) to make speeches in support of the protocol and the community.

> The **camel breeders of Rajasthan** community protocol was launched in 2017 by the Maharaja of Jodhpur in the presence of two state-level ministers, during the Marwar Camel Culture Festival.

Before the launch, discuss with the community leaders and work out the two or three key messages that you want to get across (see above). Make sure that the speeches and press materials focus on these messages.

Invite the local media (newspapers, television, radio, web organizations) to attend the launch. Prepare press releases that outlines the community protocol and your key messages.

Distribute

Distribute the community protocol to the intended recipients (make sure you have the budget to do this!). Distribute in both printed and electronic forms.

Deposit with key repositories

Send the community protocol document (in print or electronic form, or both, as appropriate) to key repositories, such as:

- The national biodiversity authority
- The national coordinator for animal genetic resources

- The national library
- The Domestic Animal Diversity Information System, *fao.org/dad-is/en/*
- The Access and Benefit-Sharing Clearing-House of the Convention on Biological Diversity, *absch.cbd.int/*

See Chapter 13 for details.

Hold events

Think of events (in additional to the launch) that you can use to get your messages across to your audiences. Examples are fairs, festivals, rallies, meetings, market days and conferences.

Work with the mass media

Identify media outlets (newspapers, television and radio stations) and journalists that may be interested in the community and its livestock. Cultivate contacts with them and invite them to events (such as the launch), and on field visits to meet community members. Arrange interviews for them with community leaders and key informants. Keep them informed through press releases, emails, phone calls and social media.

Use the web and social media

If a suitable website exists (such as the site of a community organization), upload the community protocol to it. Include a summary of the document on the appropriate webpage to encourage people to read it.

Use social media, such as Facebook and Twitter, to publicize the community protocol and to keep people updated.

Work with the educational system

Approach educational institutions (universities, veterinary and animal science colleges, training institutes, local secondary and primary schools) and inform them about the community protocols. Some may have been involved in producing the protocol; others may be interested in including the document in their curriculum. Arrange training and awareness sessions for students and staff with the local community.

Convert to other formats

Consider creating other information products based on the community protocol. Possibilities include web presentations, videos, audio podcasts, brochures, information sheets, manuals, posters, presentations and children's books. Upload video and audio materials to YouTube or similar portals.

Target key individuals

Find out who the key decision-makers are in the organizations you want to reach, and target them specifically. Send them a copy of the community protocol, along with a personal letter. Invite them to visit the community to learn about the situation and the community's concerns. Keep them briefed on events and progress.

Alongside the decision-makers, many organizations rely on a small number of skilled and influ-

ential advisers. Find out who these people are and provide them with information too. If you can get them on your side, they can act as "champions" for the community.

Use the political system

Most international treaties and national policies and laws go through a series of phases, with windows of opportunity to influence them (see Chapter 5). Make sure you understand how the decision-making system works and what the windows are, and plan your campaign accordingly.

Use the legal system

The community may have to go through the courts to defend its rights. If so, the community protocol contains vital information to make the community's case. You will need legal advice and representation. See Chapter 5 for details.

A court case may be just one part of a long struggle. Even if the community wins the case, it may still be difficult to get the authorities or powerful individuals to comply with the court ruling. Other groups may try to take advantage of the situation: for example, by harvesting timber from a protected area where grazing and firewood-collection (but not tree-cutting) are allowed. The community may have to monitor the situation and respond accordingly.

Part 3
Resources

11 Examples of community protocols

Below is a list of community protocols that have been completed or are in preparation as of April 2018. Those marked * are summarized in this chapter.

In 2018, the Interafrican Bureau for Animal Resources of the African Union (AU-IBAR) met to plan further community protocols in Africa.

Completed

Raika, India* Dromedary camel, Nari cattle, Boti sheep, Sirohi goat

Samburu, Kenya* Red Maasai sheep

Lingayat, India* Bargur hill cattle

Pashtun, Pakistan* Various breeds

Banni Maldhari, India Banni buffalo

Rebari and Jatt, India Kutchi and Kharai camels

Attappadi goat breeders, India Attappadi goat

Pullikulum cattle breeders, India Pullikulum cattle

Camel breeders of Rajasthan, India* Dromedary camel

In preparation

Mahadev Koli and Thakar, India* Dangi cattle

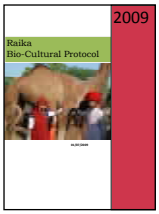
Golla, India Ganjam goat

Kuruba, India Kuruba shepherding system, including the Deccani sheep breed

Kangayam cattle breeders, India Kangayam cattle

Malgaddi, Pakistan Brela camel

Raika community protocol



The Raika are the largest pastoral community of western Rajasthan. They have a close relationship with the camel, but have also developed a spectrum of other livestock breeds, including cattle, sheep and goats. As long as common property resources were widely available, the Raika felt strong and well-endowed. Historically, they also had a close relationship with the ruling class of Rajputs, for whom they took care of camel breeding-herds and enjoyed grazing privileges in forests. But over the last 60 years, they have suffered from a range of developments that have

eroded common-property resources and restricted their access to the remaining areas, including the intensification of crop cultivation, the establishment of wildlife sanctuaries, population pressure, roads, enclosures of land, and many others.

In their protocol (Raika Samaj Panchayat 2009), the first to cover livestock, the Raika describe several breeds that they steward: the camel, Nari cattle, Boti sheep, and Sirohi and Marwari goats.

The protocol was introduced to African indigenous communities at a meeting in Nairobi in September 2009. It was also presented to the director of India's National Biodiversity Authority in Delhi and shared with the international community during a meeting on Article 8j (on traditional knowledge, innovations and practices) of the UN Convention on Biological Diversity in Montreal in November 2009. It has inspired other communities and support NGOs to establish community protocols.

More information: *pastoralpeoples.org/docs/Raika_Biocultural_Protocol.pdf, Lokhit Pashu-Palak Sansthan, lpps.org*

Samburu community protocol

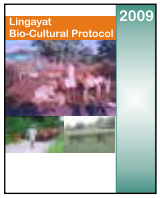
The Samburu are a group of Maa-speaking pastoralists in the districts of Samburu, Laikipia, Isiolo, Marsabit and Baringo in northern Kenya. They are closely related to the Maasai and number an estimated 800,000 households. They are composed of nine clans that are divided into two main subdivisions, the White Cow and Black Cow. Eight of the clans keep livestock; the ninth consists of hunters and gatherers. They moved to the present area following the 1911 Treaty between Maasai leader Lenana and the British. The Samburu keep the so-called small East African Zebu cattle, Red Maasai sheep and East African goats.

The Red Maasai sheep is a fat-tailed hair sheep and has a unique genetic capability to cope with internal parasites, especially *Haemonchus contortus* (a worm that infests the abomasum of ruminants). This has attracted the attention of scientists as far away as Australia who are keen to understand the genetic basis of this trait, which has obvious commercial potential. Despite this interest, the survival of the Red Maasai is threatened, because of strong promotion of crossbreeding with Dorper sheep and market demand for larger animals. The community itself seems to have lost confidence in its indigenous breed, although it is significantly more drought-resistant than the Dorper and is required for a number of life-cycle rituals.

The Samburu community protocol (Samburu Local Livestock Keepers 2010) was launched in May 2010in Maralal, in the presence of officials from the Kenyan Livestock Production Service. The Samburu were happy to see their protocol published and expressed eagerness to initiate conservation activities.

More information: Dr Jacob Wanyama, LIFE Africa Trust, *files.ethz.ch/isn/139693/SamburuBCP.pdf*

Lingayat community protocol



This protocol (Lingayat 2009) was written by a sub-group of the Lingayat, a community in the Bargur Forest Range of the Western Ghats, in Erode District, Tamil Nadu, India. They number some 10,000 people and raise a unique cattle breed, the Bargur or Barghur, besides managing the local forests. They have detailed knowledge about ethnoveterinary practices. Their cattle-keeping practices are imbued with ritual meaning. For instance, they believe in giving one day's rest to the animals per week: they do not milk the cows on Monday, nor do they use bullocks for ploughing on that day. In each herd, a couple of animals are devoted to the god Matheswaraswmi and are maintained until they die a natural death.

The Lingayat report a dramatic reduction of the Bargur cattle population over the last 10 years, so that now it numbers only about 2,500 head. They feel threatened by the expansion of the elephant population which destroys their crops. Other challenges are the spread of poisonous *Lantana* plants as well as closure of the forests by the Forest Department. Their community protocol was established in September 2009.

In spring 2010, the local forest department denied the Bargur cattle breeders the "penning permits" which have provided them with the permission to pen their herds in the forest during certain parts of the year. This scenario represents a grave threat to the livelihoods of the Lingayat and the survival of the Bargur cattle breed. The community is using the community protocol in its efforts to have the decision revoked.

More information: SEVA, *sevango.in, pastoralpeoples.org/docs/lingayat_biocultural_protocol.pdf*

Pashtun biocultural community protocol

The Pashtun are livestock breeders in northeastern Baluchistan province of Pakistan. In their community protocol (Pashtun 2010), they mention six sheep breeds, two breeds of goats and donkeys, as well as one breed each of cattle and camels. Each breed has its specific characteristics with respect to drought resistance, prolificacy, quality of products and marketability.

Livestock are kept in semi-nomadic systems, and communities have specific traditional grazing areas composed of mountainous and plain lands. During the monsoon rains, the herds are moved into the highlands, where they graze the mountain pastures. In winter they are moved down to the piedmont area. Access to resources is governed by customary laws. If conflicts arise, tribal elders (*jirga*) settle the issue. However, camel grazing is never restricted – camels can graze anywhere throughout the year.

The protocol provides interesting insights into the traditional rules by which access to resources was regulated. For instance, pastoralists from Afghanistan travelling through the area on a seasonal basis have the right of passage and can spend three days in one place, but are not allowed to establish permanent dwellings. There are also traditional community conserved areas known as *pargorr*.

More information: Dr Raziq Kakar, SAVES, *pastoralpeoples.org/docs/pashtoon_biocultural_protocol.pdf*

Biocultural community protocol of the camel breeders of Rajasthan

Concerned by the declining numbers of camels in Rajasthan, several groups of camel breeders developed this community protocol to outline the threats, claim rights and press the government for policy changes. The groups included representatives of the Raika/Rebari, Rajput, Muslim, Bishnoi, Jat and Gujjar. The protocol cites reasons for declining numbers: the disappearance of grazing areas, the spread of diseases, and the lack of economic returns, in particular because of a state government ban on the export and slaughter of camels and the lack of a market for camel milk.

The protocol calls for the establishment of official grazing areas, support for milk marketing, veterinary treatment, the promotion of camel products, and the establishment of an export market for camels.

More information:. *www.lpps.org/wp-content/uploads/2017/11/BCP-of-Rajasthans-camel-breeders-final_28-Oct_2017.pdf*

Dangi community protocol

Planned

The Dangi is a cattle breed with characteristics that enable it to survive in the remote, mountainous terrain of the Western Ghats of India. The animals are kept by the Mahadev Koli and Thakar, two tribal communities in the in Akole block of Ahmednagar district in Maharashtra, but the breed is disappearing quickly.

Lokpanchayat, a non-profit organization working with the Mahadev Koli and Thakar, is conducting action research with the communities, raising their awareness about their unique breed, and helping members form a breed association. It is planning a community protocol to record their knowledge and promote the conservation of the Dangi breed.

Lokpanchayat already has very good relations with the community. It will start conversations with community leaders, religious leader, women and young people about the idea of producing a community protocol. If they approve, Lokpanchayat will select and train a team to do this. Work will include both desk research and participatory information gathering on the origin of the breed, history, management practices, etc. The team will also collect folk songs, stories and legends related to livestock keeping, and document festivals, exhibitions and religious events related to the breed.

The finished community protocol will be published in English, Marathi (the state language) and Dangani (the local language).

More information: Vijay Sambare, Lokpanchayat

12 International agreements and policies

Delegations of pastoralists attended the 2007 International Technical Conference on Animal Genetic Resources at Interlaken, Switzerland

Global Plan of Action
for Animal Genetic Resources

FAO. 2007a, *fao.org/3/a-a1404e.pdf*

This is a framework for the sustainable use, development and conservation of the world's livestock genetic resources. It was agreed by 109 countries attending the First International Technical Conference on Animal Genetic Resources for Food and Agriculture held in Interlaken, Switzerland, in September 2007. It was subsequently endorsed by all FAO members in the 34th FAO Conference. It is implemented under the guidance of the FAO and the Commission on Genetic Resources for Food and Agriculture, but is not legally binding. The Plan contains 23 strategic priorities for action to promote the wise management of these vital resources. Several of these (see below) are relevant to livestock-keeping communities. Community protocols are especially relevant for strategic priorities 5 and 6.

Strategic Priority 2: Develop international technical standards and protocols for characterization, inventory, and monitoring of trends and associated risks.

- **Action 3:** Develop protocols for participatory monitoring of trends and associated risks, and characterization of local breeds managed by

indigenous and local communities and livestock keepers.

Strategic Priority 5: Promote agro-ecosystems approaches to the management of animal genetic resources.

- **Action 2:** Integrate agro-ecosystem approaches in national agricultural and environmental policies and programmes of relevance to animal genetic resources, where appropriate, particularly those directed towards pastoralist and rural smallholder communities, and fragile environments.

Strategic Priority 6: Support indigenous and local production systems and associated knowledge systems of importance to the maintenance and sustainable use of animal genetic resources.

- **Action 1.** Assess the value and importance of indigenous and local production systems, and identify trends and drivers of change that may affect the genetic base, and the resilience and sustainability of the production systems.

- **Action 2.** Support indigenous and local livestock systems of importance to animal genetic resources, including through the removal of factors contributing to genetic erosion. Support may include the provision of veterinary and extension services, delivery of microcredit for women in rural areas, appropriate access to natural resources and to the market, resolving land tenure issues, the recognition of cultural practices and values, and adding value to their specialist products.

- **Action 3.** Promote and enable relevant exchange, interaction and dialogue among indigenous and rural communities and scientists and government officials and other stakeholders, in order to integrate traditional knowledge with scientific approaches.

- **Action 4.** Promote the development of niche markets for products derived from indigenous and local species and breeds, and strengthen processes to add value to their primary products.

Strategic Priority 8: Establish or strengthen *in situ* conservation programmes.

- **Action 2.** Encourage the development and implementation of national and regional *in situ* conservation programmes for breeds and populations that are at risk. This may include support, either directly for breeders of threatened breeds, or measures to support agricultural production systems that manage areas of importance to breeds at risk, the encouragement of breed organizations, community-based conservation organizations, non-governmental organizations and other actors to participate in conservation efforts provided that such support or such measures are consistent with existing international agreements.

- **Action 3.** Promote policies and means to achieve the sustainable use of a diversity of local breeds, without the need for support from public funds or extra funding, through *in situ* conservation.

Strategic Priority 14: Strengthen national human capacity for characterization, inventory, and monitoring of trends and associated risks, for sustainable use and development, and for conservation.

- **Action 3.** Establish or strengthen community-based organizations, networks and initiatives for sustainable use, breeding and conservation.

Strategic Priority 20: Review and develop national policies and legal frameworks for animal genetic resources.

- **Action 1.** Periodically review existing national policies and regulatory frameworks, with a view to identifying any possible effects they may have on the use, development and conservation of animal genetic resources, especially with regard to the contribution and needs of local communities keeping livestock.

Interlaken Declaration
on Animal Genetic Resources

FAO. 2007a, *www.fao.org/3/a-a1404e.pdf*

The delegations to the Interlaken Conference (see above) also adopted the Interlaken Declaration on Animal Genetic Resources. This confirms their responsibilities for the conservation, sustainable use and development of animal genetic resources. The Declaration is not legally binding.

Paragraph 12. We recognize the enormous contribution that the local and indigenous communities and farmers, pastoralists and animal breeders of all regions of the world have made, and will continue to make for the sustainable use, development and conservation of animal genetic resources for food and agriculture. We further recognize the historic and relevant contribution of all persons engaged in animal husbandry, who have moulded animal genetic resources to meet societal needs. It is their ownership and management of the genetic resources of their livestock that has enabled them to make important contributions in the past. It is this ownership and management that should be ensured for future societal benefits. We affirm that they should participate in the fair and equitable sharing of benefits arising from the utilization of animal genetic resources for food and agriculture. We affirm the desirability, as appropriate, subject to national legislation, of respecting, preserving and maintaining traditional knowledge relevant to animal breeding and production as a contribution to sustainable livelihoods, and the need for the participation of all stakeholders in making decisions, at the national level, on matters related to the sustainable use, development and conservation of animal genetic resources.

Convention on Biological Diversity

CBD. 1993, *www.cbd.int*

A multilateral treaty ratified by 196 parties (all countries except the USA and Holy See). Promotes the conservation of biodiversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising from genetic resources. It is legally binding.

Article 8j: Each contracting Party shall, as far as possible and as appropriate:

Subject to national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge innovations and practices.

Nagoya Protocol

on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization to the convention on biological diversity

CBD. 2010, *cbd.int/abs/*, *absch.cbd.int*

A supplementary agreement to the Convention on Biological Diversity, so far ratified by 104 parties. It is legally binding. It consists of 36 articles plus an annex. Articles most relevant to local communities are numbers 5, 6, 7 and 12 (which mentions "community protocols"), and the Annex.

The genetic resources in a country are regarded as being under the control of that country's government. But the Nagoya Protocol obliges the government to share benefits from the genetic resources with the communities that hold them.

Article 2 restricts the term "Utilization of genetic resources" to research and development of the genetic and biochemical composition of the genetic resources. The Nagoya Protocol does not cover the trade in farm animals for consumption, multiplication or conventional breeding.

Article 5 deals with benefit sharing. It says that benefits from using animal genetic resources (and the associated traditional knowledge) are to be shared with the indigenous and local communities that hold these resources.

Article 6 deals with access to genetic resources. It says that countries must ensure that the prior informed consent of indigenous and local communities must be obtained for access to their animal genetic resources.

Article 7 deals with access to the traditional knowledge associated with genetic resources. It says that countries must get the prior informed consent of communities (and reach mutually agreed terms with them) to use their traditional knowledge associated with their animal genetic resources.

Article 12 mandates governments to support the development of "community protocols" and to take them into account. The Nagoya Protocol does not define what a community protocol is. Some countries (e.g., Ecuador) have made the development of community protocols mandatory. In other countries, the process is left to the initiative of individual communities.

The Annex lists monetary and non-monetary benefits that may be applied for using animal genetic resources. This list is not exhaustive; other benefits may also be applied.

The parts of the Nagoya Protocol of particular interest to communities are *highlighted* below.

Article 2. Use of terms

c) "Utilization of genetic resources" means to conduct research and development on the genetic and/or biochemical composition of genetic resources, including through the application of biotechnology as defined in Article 2 of the Convention [on Biological Diversity];

Article 5. Fair and equitable benefit-sharing

d) In accordance with Article 15, paragraphs 3 and 7 of the Convention [on Biological Diversity], benefits arising from the utilization of genetic resources as well as subsequent applications and commercialization shall be shared in a fair and equitable way with the Party providing such resources that is the country of origin of such resources or a Party that has acquired the genetic resources in accordance with the Convention. Such sharing shall be upon mutually agreed terms.

e) *Each Party shall take legislative, administrative or policy measures, as appropriate, with the aim of ensuring that benefits arising from the utilization of genetic resources that are held by indigenous and local communities, in accordance with domestic legislation regarding the established rights of these indigenous and local communities over these genetic resources, are shared in a fair and equitable way with the communities concerned, based on mutually agreed terms.*

f) To implement paragraph 1 above, each Party shall take legislative, administrative or policy measures, as appropriate.

g) Benefits may include monetary and non-monetary benefits, including but not limited to those listed in the Annex.

h) *Each Party shall take legislative, administrative or policy measures, as appropriate, in order that the benefits arising from the utilization of traditional knowledge associated with genetic resources are shared in a fair and equitable way with indigenous and local communities holding such knowledge. Such sharing shall be upon mutually agreed terms.*

Article 6. Access to genetic resources

1. In the exercise of sovereign rights over natural resources, and subject to domestic access and benefit-sharing legislation or regulatory requirements, access to genetic resources for their utilization shall be subject to the prior informed consent of the Party providing such resources that is the country of origin of such resources or a Party that has acquired the genetic resources in accordance with the Convention, unless otherwise determined by that Party.

2. *In accordance with domestic law, each Party shall take measures, as appropriate, with the aim of ensuring that the prior informed consent or approval and involvement of indigenous and local communities is obtained for access to genetic resources where they have the established right to grant access to such resources.*

Article 7. Access to traditional knowledge associated with genetic resources

In accordance with domestic law, each Party shall take measures, as appropriate, with the aim of ensuring that traditional knowledge associated with genetic resources that is held by indigenous and local communities is accessed with the prior and informed consent or approval and involvement of these indigenous and local communities, and that mutually agreed terms have been established.

Article 12. Traditional knowledge associated with genetic resources

1. *In implementing their obligations under this Protocol, Parties shall in accordance with domestic law take into consideration indigenous and local communities' customary laws, **community protocols** and procedures, as applicable, with respect to traditional knowledge associated with genetic resources. [emphasis added]*

2. *Parties, with the effective participation of indigenous and local communities concerned, shall establish mechanisms to inform potential users of traditional knowledge associated with genetic resources about their obligations, including measures as made available through the Access and Benefit-sharing Clearing-House for access to and fair and equitable sharing of benefits arising from the utilization of such knowledge.*

3. Parties shall endeavour to support, as appropriate, the development by indigenous and local communities, including women within these communities, of:

   a) ***Community protocols** in relation to access to traditional knowledge associated with genetic resources and the fair and equitable sharing of benefits arising out of the utilization of such knowledge; [emphasis added]*

   b) Minimum requirements for mutually agreed terms to secure the fair and equitable sharing of benefits arising from the utilization of traditional knowledge associated with genetic resources; and

   c) Model contractual clauses for benefit-sharing arising from the utilization of traditional knowledge associated with genetic resources.

4. *Parties, in their implementation of this Protocol, shall, as far as possible, not restrict the customary use and exchange of genetic resources and associated traditional knowledge within and amongst indigenous and local communities in accordance with the objectives of the Convention.*

Annex: Monetary and non-monetary benefits

1. **Monetary benefits** may include, but not be limited to:

   a. *Access fees/fee per sample collected or otherwise acquired;*

   b. *Up-front payments;*

   c. *Milestone payments;*

   d. *Payment of royalties;*

   e. *Licence fees in case of commercialization;*

f. *Special fees to be paid to trust funds supporting conservation and sustainable use of biodiversity;*

g. Salaries and preferential terms where mutually agreed;

h. Research funding;

i. Joint ventures;

j. *Joint ownership of relevant intellectual property rights.*

2. **Non-monetary benefits** may include, but not be limited to:

a. Sharing of research and development results;

b. Collaboration, cooperation and contribution in scientific research and development programmes, particularly biotechnological research activities, where possible in the Party providing genetic resources;

c. *Participation in product development;*

d. Collaboration, cooperation and contribution in education and training;

e. Admittance to *ex situ* facilities of genetic resources and to databases;

f. Transfer to the provider of the genetic resources of knowledge and technology under fair and most favourable terms, including on concessional and preferential terms where agreed, in particular, knowledge and technology that make use of genetic resources, including biotechnology, or that are relevant to the conservation and sustainable utilization of biological diversity;

g. Strengthening capacities for technology transfer;

h. Institutional capacity-building;

i. Human and material resources to strengthen the capacities for the administration and enforcement of access regulations;

j. *Training related to genetic resources with the full participation of countries providing genetic resources, and where possible, in such countries;*

k. Access to scientific information relevant to conservation and sustainable use of biological diversity, including biological inventories and taxonomic studies;

l. Contributions to the local economy;

m. Research directed towards priority needs, such as health and food security, taking into account domestic uses of genetic resources in the Party providing genetic resources;

n. Institutional and professional relationships that can arise from an access and benefit-sharing agreement and subsequent collaborative activities;

o. *Food and livelihood security benefits;*

p. *Social recognition;*

q. *Joint ownership of relevant intellectual property rights.*

UN Declaration on the Rights of Indigenous Peoples

UN General Assembly. 2007, *un.org/development/desa/indigenouspeoples/declaration-on-the-rights-of-indigenous-peoples.html*

Declaration by the UN General Assembly. It is not legally binding.

Article 31.1. Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions, literatures, designs, sports and traditional games and visual and performing arts. They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions.

Voluntary Guidelines

to support the progressive realization of the right to adequate food in the context of national food security

FAO. 2004, *fao.org/docrep/009/y7937e/y7937e00.htm*

Adopted unanimously by the FAO Council in 2004. It is not legally binding.

Guideline 8.1, Access to resources and assets. States should facilitate sustainable, non-discriminatory and secure access and utilization of resources consistent with their national law and with international law and protect the assets that are important for people's livelihoods. States should respect and protect the rights of individuals with respect to resources such as land, water, forests, fisheries and livestock without any discrimination. Where necessary and appropriate, States should carry out land reforms and other policy reforms consistent with their human rights obligations and in accordance with the rule of law in order to secure efficient and equitable access to land and to strengthen pro-poor growth. Special attention may be given to groups such as pastoralists and indigenous people and their relation to natural resources.

13 Organizations

International NGOs and livestock development networks

Coalition of European Lobbies for Eastern African Pastoralism, CELEP

celep.info

International Union for Conservation of Nature, IUCN

Environmental Law Centre,
Godesberger Allee 108-112, 53175
Bonn, Germany

iucn.org/theme/environmental-law/about/environmental-law-centre

ELCSecretariat@iucn.org

League for Pastoral Peoples and Endogenous Livestock Development, LPP

Pragelatostrasse 20, 64372 Ober-Ramstadt,
Germany

pastoralpeoples.org

info@pastoralpeoples.org

Natural Justice

Mercantile Building, 63 Hout
Street, Cape Town, 8000, South
Africa

naturaljustice.org, info@naturaljustice.org.za

Vétérinaires sans Frontières, VSF-Belgium

Avenue Paul Deschanellaan 36-38,
1030 Brussels

vsf-belgium.org

k.vantroos@vsf-belgium.org

International organizations

African Union, Interafrican Bureau for Animal Resources, AU-IBAR

PO Box 30786, Nairobi 00100, Kenya

au-ibar.org

ibar.office@au-ibar.org

Convention on Biological Diversity, CBD

Access and Benefit-Sharing Clearing-House

absch.cbd.int

This clearing-house was established by Article 14 of the Nagoya Protocol. It aims to facilitate connections between the users and providers of genetic resources and traditional knowledge. It contains a section where communities can deposit their community protocols, so make their claims to animal genetic resources and the associated traditional knowledge more widely known.

Food and Agriculture Organization of the United Nations, FAO

Domestic Animal Diversity Information System, DAD-IS

Via delle Terme di Caracalla, 00153 Rome, Italy

fao.org/dad-is/en/

fao.org/dad-is/national-coordinators/en/

dad-is@fao.org

A searchable database of breed-related information. It also lists the names and addresses of national coordinators for the management of animal genetic resources.

Commission on Genetic Resources for Food and Agriculture

Via delle Terme di Caracalla, 00153 Rome, Italy

fao.org/nr/cgrfa/cgrfa-home/en/

cgrfa@fao.org

Pastoralist Knowledge Hub

Via delle Terme di Caracalla, 00153 Rome, Italy

www.fao.org/pastoralist-knowledge-hub/en/

pastoralist-hub@fao.org

International Livestock Research Institute, ILRI

PO Box 30709, Nairobi 00100, Kenya

ilri.org

ILRI-Kenya@cgiar.org

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Community protocols

for pastoralists and livestock keepers

Claiming rights under the Convention on Biological Diversity

A **community protocol** is a document, produced by a local community, about the biological diversity it creates and conserves. Community protocols are an important way for local people to claim their rights under national and international law, especially through the Nagoya Protocol to the Convention on Biological Diversity. Community protocols also have many other uses: telling the outside world about the community's role in conserving biological diversity, documenting its knowledge, and raising awareness among community members about their unique livestock and livelihood system.

This manual shows how pastoralists and other livestock-keeping communities can draw up a community protocol about their animal breed or production system. It describes why they should consider producing a community protocol, walks through the steps of doing so, and advises how to use the finished document. It explains in easy language the complex concepts of access and benefit sharing and how the community protocol can be used within the legal system.

This manual is aimed at community leaders and organizations, nongovernment organizations and all those concerned with managing and conserving animal breeds and production systems.

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LEAGUE FOR PASTORAL PEOPLES AND ENDOGENOUS LIVESTOCK DEVELOPMENT

LIFE Network

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