

Local Livestock For Empowerment



The LIFE Network

Imagine the world in black and white...

IMAGINE IF ALL cows were black and white.

If all the pigs were pink.

If every sheep, and every chicken, were white.

Fanciful? Unfortunately not. Many livestock breeds are dying out. Between 2001 and 2007, 62 breeds disappeared. According to the Food and Agriculture Organization of the United Nations, the world has already lost 10% of its breeds – and that is counting only those that have been documented.

A breed becomes extinct almost every month. An estimated 20% of breeds are thought to be at risk. Pushed out by economic and social changes, they are being replaced by exotic breeds – such as those black-and-white cows and pink pigs – that produce more, but are more costly to keep.

are hardy, resistant to pests and diseases, and able to survive on meagre feed and little water. In difficult conditions, they produce a wide range of products, pull ploughs and carts, and produce dung to use as fuel and fertilizer. They are vital to the livelihoods and survival of millions of livestock keepers worldwide.

The LIFE Network

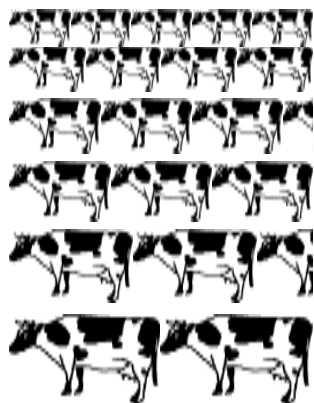
Local Livestock for Empowerment (the LIFE Network) is a network of non-government organizations and individuals who are concerned about the future of local livestock breeds, and about the people who breed these animals and rely on them for their livelihoods.

This booklet describes the work of the LIFE Network and draws some lessons from its experiences.

The value of local breeds

The world has some 7,600 livestock breeds, nearly all developed by farmers and herders over centuries of breeding and selection. These breeds are adapted to often-harsh conditions – deserts, icy mountains, tropical forests, drought-prone savannah. They

▼ Many local breeds have still not been documented. Here: studying a breed in a dryland area of Uganda using a method developed by the LIFE Network



▲ Black-and-white Holstein-Friesian dairy cattle produce lots of milk. But they are genetically uniform, so relying on them alone is risky – and they do not perform well in less-than-ideal conditions



Loss of ecosystems

Poor use of resources

Food insecurity

A group of Brahman cattle with large, curved horns resting on the ground in a field. The cattle are dark brown with prominent white horns. They are in a grassy field with trees in the background.

▲ *Ankole cattle in Uganda: Soon to be found only in zoos?*

Less economic potential

 3



▲ The miniature Vechur cattle breed was practically extinct. Rescued by the Vechur Conservation Trust, it is now much in demand to produce manure for organic horticulture.

Poorer ability to adapt to climate change

Unlike exotic breeds, many local breeds can cope well with high temperatures. That makes them better suited to adapt to climate changes and global warming.

Livelihoods destroyed

Over 700 million people worldwide rely at least partially on livestock for food, income, labour and fuel. As they often live in harsh environments, their animals need to be adapted to the local conditions. A herder without suitable animals has little choice but to move into the city in search of work as an unskilled labourer.

Loss of culture and knowledge

In many cultures, peoples' lives revolve around their livestock. For a Mongolian camel herder, an Argentinean shepherd and a Kenyan pastoralist, animals are not just a source of food and income; they are a savings bank, a wedding gift, a link to a potentially hostile clan, a source of pride, a tie to spiritual roots, a symbol of identity.

Livestock keepers have detailed traditional knowledge about their animals, their behaviour, how best to keep them, and how to prevent and treat their diseases. Lose these breeds, and this rich store of wisdom evaporates.

The best way to conserve breeds

There are three main ways to conserve livestock breeds:

Cryopreservation

This involves deep-freezing sperm and eggs.

Ex-situ conservation

This means keeping breeding animals outside their own environment, for example at a research station or on a government ranch.

In-situ conservation

This enables farmers and herders to maintain breeding animals in their original environment.

While all three have a role to play, **in-situ conservation** is best: it enables the animals to continue to evolve and adapt to their changing environment – a feature that is particularly important as climate change becomes more pronounced.



▲ This mixed flock of sheep in a remote area of northern Kenya shows how imported breeds (with the black heads) are replacing local breeds

Why are local breeds declining?

MOST LOCAL BREEDS are kept by small-scale farmers or pastoralists. They require few external inputs, though managing them may require labour and much skill. A poor family can keep a flock of chickens or a few goats: they cost little to maintain but produce eggs, meat and milk that help the family make ends meet.

Exotic breeds, on the other hand, require expensive housing, feed, insemination services and veterinary care. To break even, livestock keepers must keep more animals – pushing livestock keeping beyond the reach of most people. The result: large, capital-intensive livestock companies that raise exotic breeds force small-scale livestock keepers and their local breeds out of the market.

Global and national policies also favour high-input, industrial-scale livestock production. So does most research on livestock. They neglect indigenous breeds and local livestock production systems that are integrated into the local ecosystem. Supermarkets demand products that conform to strict standards. Variety is out; uniformity is in.

At the same time, many policies actively discriminate against local breeds and production systems. Pastoralists are fenced out of their traditional grazing areas; misguided regulations force small-scale producers to conform to costly “biosecurity” measures; marketing and export rules discriminate against animals and products raised under local conditions.

Examples of declining breeds

Red Maasai sheep, East Africa

Raised by the Maasai in Kenya and Tanzania, the Red Maasai sheep is a hardy animal that appears to have some resistance to internal parasites (worms). It is becoming hard to find because of cross-breeding with other breeds.

Ankole cattle, Uganda

The Longhorn Ankole are a dairy and meat breed developed by Bahima pastoralists. They are highly valued for the high fat content of their milk, as well as their tasty, lean,

low-cholesterol meat. Indiscriminate cross-breeding with exotic dairy cattle is rapidly diminishing the number of purebred Ankole.

Aseel chickens, India

Aseel chickens in Andhra Pradesh are among the oldest known poultry breeds. They have huge cultural and livelihood significance for the Advasi people. Government-supported replacement with other breeds makes it increasingly difficult to find pure-bred Aseels.

Uriu cattle, Vietnam

Uriu cattle are kept by smallholder rice growers in the Nghe An region. Multi-purpose animals, they are especially used to pull ploughs. Because the soil is stony, mechanized land preparation is not possible in this area. But cross-breeding with Indian humped cattle is threatening the Uriu's survival.

▼ *Red Maasai sheep in Kenya: Resistant to parasites, but swamped by imported breeds*



The LIFE Network



▲ Indian pastoralists presenting a statement on Livestock Keepers Rights to government scientists



▲ The LIFE Network logo is based on a traditional Indian design

THE LOCAL LIVESTOCK FOR EMPOWERMENT (LIFE) NETWORK is action research and advocacy network that aims to secure and improve the livelihoods of pastoralists and small-scale livestock keepers by promoting the sustainable use and conservation of local breeds. The network's membership includes NGOs working at the grassroots level, herders' associations, scientists, volunteers and individual supporters. The network was formed in 2000.

The LIFE Network sees pastoralists and small-scale livestock keepers as central actors in biodiversity conservation. It believes in using local breeds as a basis for sustainable rural development. It seeks to support production systems which benefit livestock keepers, their animals, biodiversity, the environment and the consumer.

► Mobility is vital for the survival of many breeds: pastoralists are constantly on the move in search of pasture and water



LIFE Network goals

Conserve livestock diversity in-situ, in their original environments.

Empower livestock keepers who conserve biodiversity and involve them in national and international policy processes.

Promote socially inclusive and ecologically sustainable livestock farming that is in tune with nature.

Support the development of diverse products from local breeds through research, appropriate technologies, value addition and marketing.

Strengthen rural income opportunities based on local breeds.

Advocate holistic conservation approaches which preserve all components of biodiversity: wildlife, local livestock breeds or species, ecosystems, and traditional wisdom.

Activities

LIFE Network activities have focused on seven areas:

- Livestock Keepers' Rights
- Breed documentation and biocultural protocols for livestock-keeping communities
- Awards to livestock keepers
- Marketing niche products from local breeds
- Networking
- Training and capacity building
- Advocacy and public relations.

Livestock Keepers' Rights

THE 2001 INTERNATIONAL TREATY ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE established the concept of **Farmers' Rights**. These enable farmers to continue conserving and innovating crop biodiversity, and recognize and reward them for creating and maintaining crop genetic resources. The treaty allows farmers to sow and trade seed that they have grown – preventing big companies from gaining a monopoly over this vital resource.

But what about livestock? There is no equivalent international agreement to promote the conservation of livestock breeds. Livestock keepers fear that without such safeguards, local breeds will die out, and they will lose the right to breed the animals that they have maintained for centuries.

In 2003–7, the LIFE Network facilitated a series of meetings of grassroots livestock keepers from over 20 countries. These developed the concept of “**Livestock Keepers' Rights**” (see box).



Livestock Keepers' Rights

Three principles

1. Livestock keepers are **creators of breeds and custodians of animal genetic resources** for food and agriculture.
2. Livestock keepers and the sustainable use of traditional breeds are dependent on the **conservation of their respective ecosystems**.
3. Traditional breeds represent **collective property, products of indigenous knowledge and cultural expression** of livestock keepers.

Five rights

1. Livestock keepers have the right to make **breeding decisions** and breed the breeds they maintain.
2. Livestock keepers have the right to participate in **policy formulation and implementation** processes on animal genetic resources for food and agriculture.
3. Livestock keepers have the right to appropriate **training and capacity building** and equal access to **relevant services** enabling and supporting them to raise livestock and to better process and market their product.
4. Livestock keepers have the right to participate in the identification of **research needs and research design** with respect to their genetic resources, as mandated by the principle of Prior Informed Consent.
5. Livestock keepers have the right to effectively **access information** on issues related to their local breeds and livestock diversity.



▲ *Camels in Rajasthan: Policy changes are needed to conserve this icon of India's desert state*

Photo: Rolex Awards for Enterprise

◀ *A delegation from LIFE campaigned for Livestock Keepers' Rights in Madrid, Spain*

On the agenda, but not yet in law

The LIFE Network presses for Livestock Keepers' Rights to be recognized by governments and in international law. Many policymakers, government officials and scientists are sympathetic, and Livestock Keepers' Rights are now firmly on the international agenda – though there is still a long way to go before they achieve formal recognition under international law.

Meanwhile, the LIFE Network has developed a **Code of Conduct** (LIFE Network 2010 – see the box on the right) to act as a guide for researchers, companies and governments when working with livestock keepers. Livestock keepers can also use the Code when advocating for their rights in national policy decisions.

Lessons on rights

Specialist skills

It takes special skills and knowledge to bridge the worlds of livestock keeping and international law. The LIFE Network draws on the expertise of lawyers, policy advocates, community organizers and scientists to make the case for Livestock Keepers' Rights.

More on Livestock Keepers' Rights

Köhler-Rollefson, I. and J. Wanyama. 2003. **The Karen Commitment.** Indigenous livestock breeding communities and animal genetic resources. German NGO Forum on Environment and Development, Bonn. <http://tinyurl.com/ycn9pof>

Köhler-Rollefson, I., H.S. Rathore, and E. Mathias. 2008. **Local breeds, livelihoods and livestock keepers' rights in South Asia.** *Tropical Animal Health and Production*. 41(7):1061–70

Köhler-Rollefson, I., and LIFE Network. 2007. **Keepers of genes:** The interdependence between pastoralists, breeds, access to the commons, and livelihoods. LPPS.

LIFE Network. 2009. Declaration on Livestock Keepers' Rights. <http://tinyurl.com/36xz89k>

LIFE Network. 2010. **Supporting livelihoods and local livestock breeds:** Guidelines for putting Livestock Keepers' Rights into practice. <http://tinyurl.com/35w8s3h>

LPPS and LPP. 2002. **Local livestock breeds for sustainable rural livelihoods.** Towards community-based approaches for animal genetic resource conservation. Proceedings of a conference/workshop held on 1-4 November, 2000 in Udaipur and Sadri, Rajasthan, India. LPPS, LPP, SEVA.

▼ *LIFE member Lokhit Pashu-Palak Sansthan campaigns to save the camel in Rajasthan, India*



Documenting breeds

IMAGINE YOU SPEND a lifetime cultivating roses. You develop the perfect bloom: it is beautiful, fragrant and hardy. Then along comes a stranger, who takes a cutting and uses it to grow and sell copies of your rose – without your knowledge or permission.

Annoyed? That is how livestock keepers feel when outsiders exploit their animals. Breeds and other animal genetic resources (such as individual genes that confer valuable traits) do not exist in a vacuum. They were developed through generations of exposure to unique environments, and years of selection and breeding by livestock keepers. But unscrupulous outsiders may “bio-prospect” genetic resources – identifying useful traits and building them into other animals, without the knowledge or permission of the originators.

Documenting breeds

To make the association between breeds and communities visible, and to put traditional knowledge on record, the LIFE Network has developed a participatory method for **documenting breeds**. Unlike previous methods, this is based on the indigenous knowledge of the people who raise them. Previous methods focused on the breeds’ appearance and production characteristics – not on their history, cultural associations or production system.

In **Uganda**, for example, the LIFE Network helped Bahima pastoralists develop a book on their Longhorn Ankole cattle. It has also used this method with pastoralist groups in **India** and **Kenya**.

Biocultural protocols

It is a further step to developing a **biocultural protocol**. This is a document developed by representatives of livestock-keeping communities in consultation with lawyers and specialists on indigenous knowledge. It details the community’s breeds, its traditional knowledge of the animals, and its lifestyle in relation to the environment. It puts on record the community’s role in the management of



◀ A biocultural protocol is an important record of how the community manages biodiversity

biological diversity – its livestock and its contribution to managing the ecosystem.

Preparing a biocultural protocol helps community members realize the richness of their own knowledge and culture, and learn about their rights under national and international laws, including their right to conserve their breeds. Instead of being passive recipients of outside interventions, they become active players in claiming their rights.

The LIFE Network assists livestock-keeping communities to develop biocultural protocols. It has so far helped the Raika and Lingayat in India, the Pashtoon in Pakistan and the Samburu in Kenya develop such documents.

Lessons on documentation

Listen carefully

It is necessary to listen closely to the interests and priorities of livestock keepers in order to ensure that they have a voice. Outsiders may make faulty assumptions: for example, many livestock keepers are more interested in conserving their way of life than in benefiting financially from their breeds. Frequent meetings and close collaboration with grassroots livestock keepers are vital to ensure that the LIFE Network is representing their interests.

Empowerment, not representation

Rather than speaking on their behalf, the LIFE Network aims to give livestock keepers themselves a voice. That means ensuring they are aware of the issues that affect them, and providing them with forums where they can express their views.

More on documentation

Herders of Nyabushozi, Kiruhura district, SW Uganda, with support of Elizabeth Katushabe. 2009. **The Ankole longhorn cattle sustain our life and livelihood: We have to conserve them.** PENHA, LPP and LIFE Network, Kampala, Uganda.

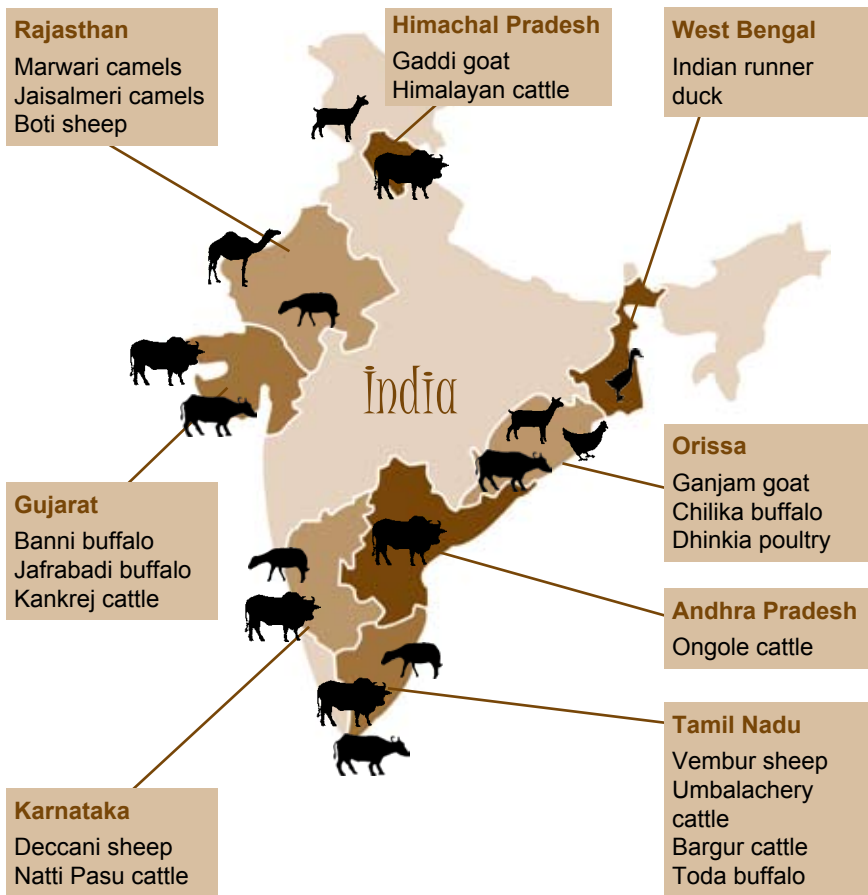
SEVA. 2009. **Lingayat bio-cultural protocol.** SEVA, India.

Lokhit Pashu-Palak Sansthan and Ilse Köhler-Rollefson 2005. **Indigenous breeds, local communities: Documenting animal breeds and breeding from a community perspective.** LPPS, Sadri, Rajasthan, India. 78 pp. www.pastoralpeoples.org/docs/ikab.pdf

Raika Samaj Panchayat. 2009. **Raika biocultural protocol.** LPPS,

Samburu local livestock keepers. 2009. **The Samburu community protocol.**

Awards for breeders



THE CONTRIBUTION THAT livestock breeders make to the conservation and further development of their breeds is seldom acknowledged. That is why LIFE Network partners in India have begun recognizing individuals and communities for their efforts in rearing and conserving local breeds.

In 2009, the LIFE Network, in collaboration with SEVA and supported by the National Biodiversity Authority of the Indian government, presented awards to 24 pastoralists and breeders associations in eight Indian states. The awards included a certificate and Rs 10,000 in cash.

The award winners were chosen for their involvement in the conservation of local livestock breeds.

The Indian National Biodiversity Authority has agreed in principle to continue such recognition for livestock keepers every year – similar to the awards conferred on farmers who conserve native crop varieties.

▲ The LIFE Network recognized the contribution of 24 pastoralists and breeders' associations to conserving breeds in eight states in India



► The Chilika buffalo is adapted to feed on vegetation in the brackish wetlands of coastal Orissa

Marketing niche products

LOCAL BREEDS HAVE often unique characteristics that can be turned into specialty products. Examples include coloured wool or hides, extra-fine fibre, and meat, milk and eggs with special tastes. These can be further processed, capitalizing on traditional processing techniques and designs. While such products may be unsuitable for mass markets that demand a highly uniform product, they are ideal for certain market segments. But they must be marketed the right way, for example by stressing local ties (since these breeds are found only in certain localities and are raised by certain ethnic groups) and ecological production conditions.

Examples of niche marketing

Argentina

The **Linca sheep** breed is raised by the Mapuche people in the foothills of the Andes in Patagonia. There is little demand for its coloured wool, so flocks of Linca have been declining. A network of Mapuche women has launched a community sales outlet to sell ponchos and other traditional items made from the Linca wool.

Kyrgyzstan

In the Pamir mountains, a local breed of **goats** produces ultra-fine cashmere. Herders currently sell the whole fleece, which has low value; they could earn more if they were to comb out the finest cashmere before shearing the fleece. A local NGO is linking them to potential buyers in Europe and North America.

India

In Rajasthan, the numbers of **dromedary camels** have been declining as Raika herders have been excluded from their traditional grazing grounds, and as camels have been replaced by tractors to pull carts and ploughs. New hope has come from a successful campaign by Lokhit Pashu-Palak Sansthan, a LIFE Network member, to permit the marketing of camel milk. A new range of camel-milk-based dairy products, including ice cream,

has boosted the value of camels and the Raika's interest in maintaining their herds.

Mauritania

The Tiviski dairy in Nouakchott, the Mauritanian capital, has set up a system to collect **camel** milk every day from herders in the south of the country, and bring it hundreds of kilometres to Nouakchott for processing. Tiviski has also developed a cheese from camel milk and is trying to export it to Europe – but has met with bureaucratic barriers from the European Union.

Promoting marketing of local breeds

The LIFE Network promotes niche marketing efforts through documenting and analysing projects, initiating and supporting niche marketing projects, and lobbying for a favourable policy environment. The goal is to help livestock keepers earn more from their existing lifestyle and conserve their breeds.

Lessons on marketing

Generating employment

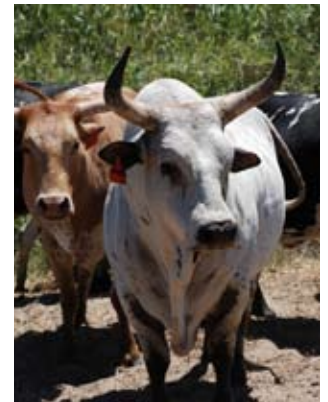
Developing and marketing products from local breeds can generate employment and income for livestock keepers, processors and traders.

Benefits for women and the poor

Initiatives to develop niche markets often benefit women and the poor, since it is they who tend to keep local breeds and do work such as spinning and weaving.

Conserving breeds, environment and culture

Niche marketing of products from local breeds can reverse the decline in the breeds, and conserve both environment and cultural values.



▲ The Nguni cattle breed in southern Africa has become prized for its patterned hides



▲ The 2010 book *Adding value to livestock diversity* draws lessons from eight niche marketing efforts around the world (see details below)

More on marketing

LPP, LIFE Network, IUCN-WISP and FAO. 2010. **Adding value to livestock diversity** – Marketing to promote local breeds and improve livelihoods. *FAO Animal Production and Health Paper 168*. Rome. www.fao.org/docrep/012/i1283e/i1283e00.htm

Networking



▲ *Listening to what women pastoralists have to say in India*

More on networking

LIFE Network
www.lifeinitiative.net

Endogenous Livestock
Development Network:
www.eldev.net

THE LIFE NETWORK consists of a small group that links and collaborates with like-minded organizations and individuals to further the use and conservation of local livestock breeds and sustainable livestock production. Networking tools include the participation in mailing lists and networks, attending workshops, conferences, consultations and other meetings, and the organization of common activities. The network also supports and advises projects of its members and other organizations on local breeds and knowledge.

The network also facilitates interaction and dialogue between stakeholders in livestock development. It does this by organizing multi-stakeholder workshops, consultations, writeshops and training courses. Such activities often serve more than one purpose. Writeshops, for example, have the main goal

of producing books or other information materials, but in addition they further information exchange and networking among participants. Multi-stakeholder workshops and training courses help raise awareness on topics addressed by the LIFE Network.

Such activities enable the network to identify committed new members, learn from others' experience, refine its own goals and positions, and expand its outreach.

Lessons on networking

Flexibility rather than formality

The LIFE Network's success is based on the willingness of its members to join together as required on subjects that interest them. For a small network like LIFE, a loose arrangement is more effective than a formal structure. Its activities are need-based rather than structure-driven, allowing the network to react flexibly to new situations.

Leveraging resources

The LIFE Network tries not to replicate others' efforts. For example, it does not have its own email discussion group; members contribute to the Endogenous Livestock Development Network, which addresses a broader set of subjects.



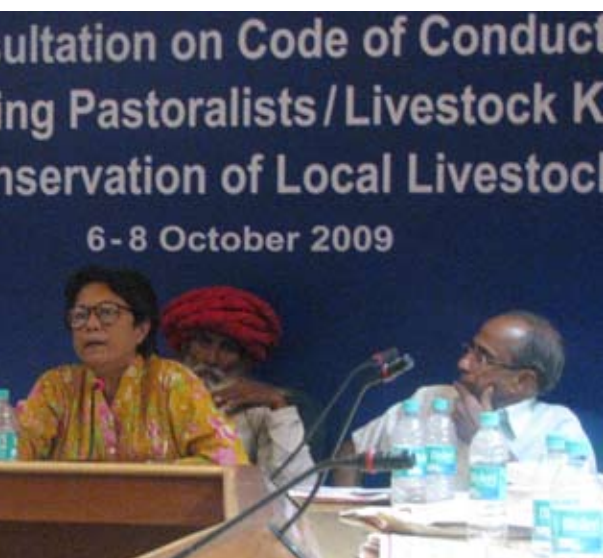
Training and capacity building

LIFE NETWORK MEMBERS offer training on Livestock Keepers' Rights, breed documentation, community-based breed conservation, biocultural and community protocols, and people-centred livestock development. Trainees come from livestock-keeping communities, non-government organizations, government, universities and other institutions.

Training commonly uses a mix of lectures, discussions and field activities. Besides teaching new methods, they aim to make trainees aware of the importance of local breeds and resources and the role of livestock keepers in developing and conserving these breeds. Many LIFE Network training courses have mixed groups of participants (e.g., livestock keepers and government staff) in a conscious attempt to further interaction and understanding between these groups.

The LIFE Network also provides hands-on training in advocacy: it invites a few newcomers from interested civil society organizations and universities to participate with experienced network members in national and international negotiations and lobbying activities.

▼ *Developing a code of conduct to guide research and development of livestock*



Lessons on capacity building

Documentation for empowerment

In the LIFE breed documentation method, herders learn how to document their breeds from their own point of view and in their own language. Both the process and the resulting document are important for capacity building and empowerment.

Training multiple stakeholders

Involving different groups of stakeholders in training can bridge gaps between them and foster mutual understanding, respect and collaboration.

Involving women and young people

Many livestock keeping societies are highly conservative, with older men making most of the decisions. Training and capacity building must also target younger people and women, who are often the ones directly responsible for caring for the animals.

▲ *Participants in a LIFE workshop in Uganda proudly display their certificates*

More on capacity building

LIFE Network, forthcoming. **People-centred livestock development manual**

Mathias, E., T. Loquang, and I. Köhler-Rollefson. 2009. **Community-based documentation as a tool for empowerment: The example of Karamoja**. In: Knaute, D. and S. Kagan (eds). *Sustainability in Karamoja? Rethinking the terms of global sustainability in a crisis region of Africa*. Rüdiger Köppe Verlag, Köln, pp. 440–54.

Advocacy and public relations



▲ LIFE Network members in India lobbying for pastoralists' rights

LOBBYING FOR THE recognition of livestock keepers and their breeds is an important part of the LIFE Network's activities. Members lobby at the national, regional and international levels in various ways:

Workshops and conferences

The LIFE Network organizes workshops and conferences on various aspects of livestock breeds, Livestock Keepers' Rights and sustainable livestock development. These enable livestock keepers, NGOs and others to voice their concerns and needs and highlight solutions from their point of view and discuss these with other stakeholders.

Side-events

The network organizes presentations, exhibits and debates at national and international conferences. Such forums have included the international intergovernmental negotiations on animal genetic resources of the Food and Agriculture Organization of the United Nations, the Convention on Biological Diversity, the World Intellectual Property Organization, and meetings of their subsidiary bodies. Other outlets have been scientific conferences such as international conferences on animal production and organic agriculture.



▲ Using the media to raise awareness of pastoralist issues

Publications and films

LIFE Network publications are aimed at making information on this sometimes complex subject accessible to as wide an audience as possible. Most publications are jointly published by LIFE Network members. Network members have also produced a number of films on local breeds, Livestock Keepers' Rights and biocultural protocols.

Networking and training

The activities described on the previous two pages also raise awareness on the value of local breeds and the importance of their keepers for their development and conservation.

Lessons on advocacy

Constructive dialogue, not confrontation

The LIFE Network has developed close relationships with various government and international organizations in order to promote the concept of Livestock Keepers' Rights.

Contributing expertise

LIFE Network members can contribute valuable specialist expertise to government delegations during international negotiations on livestock issues.

More on advocacy

Köhler-Rollefson, I. 2004. **Livestock keepers' rights**: Conserving breeds, supporting livelihoods. League for Pastoral Peoples. <http://tinyurl.com/yjnegbp>

Films on Livestock Keepers' Rights

Biocultural protocols and access and benefit sharing: <http://tinyurl.com/yjnrbee>

Developing biocultural protocols among the Raika (India) and Samburu (Kenya): <http://tinyurl.com/yj53p3l>

Organization of the LIFE Network

THE LIFE NETWORK consists of a core group of active members and a wider network of supporting partners.

Coordination

The network has an international board, a secretariat and regional coordinators for Africa and Asia.

Supporters

The LIFE Network is grateful to the following organizations and individuals which have supported its work:

Organizations

- Bread for the World
- Christensen Fund
- HIVOS Oxfam-NOVIB Biodiversity Fund
- Misereor
- Rockefeller Foundation
- Schweisfurth Stiftung
- Swedbio
- Swiss Agency for Development and Cooperation
- Swissaid

Individuals

- Bettina Bock
- Günther Bock
- Bruno Haas
- The Stürz family



▲ Livestock keepers are concerned about their livelihoods. Meetings, like this one in India about the Forest Rights Act, often attract large numbers of people



▲ In 2007, a LIFE Network delegation lobbied delegates to an international conference on animal genetic resources in Interlaken, Switzerland

Contacts

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Cover photos

Front: Documenting cattle breeds in Uganda

Back: Dancing camels are a unique part of Rajasthan's tradition and culture.

Photo credits

Ilse Köhler-Rollefson: pages 4 (top), 6, 7 (bottom), 8, 9, 10, 11, 12, 14, 15, back cover; **Evelyn Mathias:** cover, pages 1, 2, 4 (bottom), 5, 13; **Rolex Awards for Enterprise:** page 7.