

Endogenous Livestock

Development

Strengthening local initiatives

Using resources sustainably



Compiled by Evelyn Mathias

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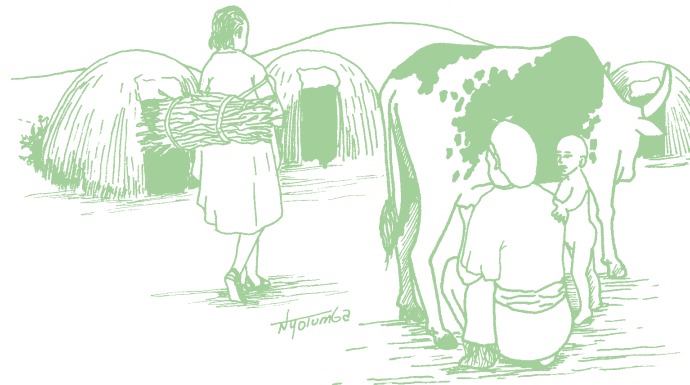
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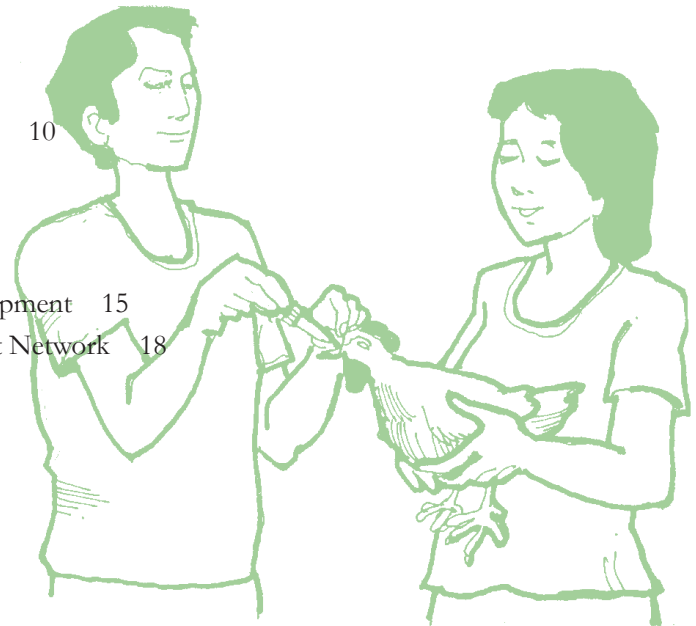
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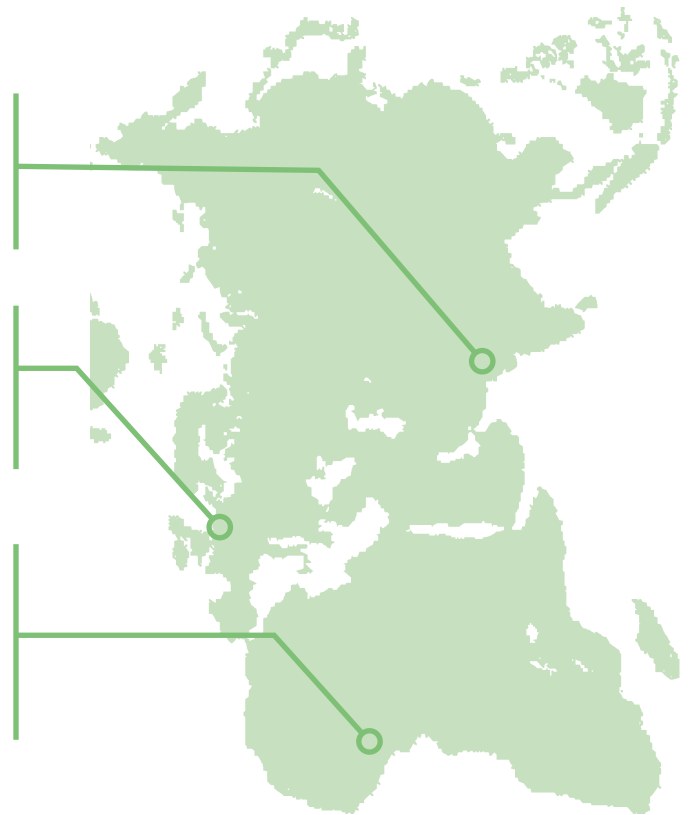


Three local initiatives

INDIA: RAIKA PASTORALISTS in arid Rajasthan are fighting for access to water, pasture and services such as veterinary care. Mobile livestock herding is often the best way to use fragile drylands, but few governments seem to recognize this.

THE NETHERLANDS: FACED with rising costs, a group of Dutch dairy farmers have changed their management approach. They have cut down on concentrate feed and now give their cows more roughage. They apply less fertilizer on their pastures. This cuts costs and improves soil quality and biodiversity in the fields.

GHANA: CATTLE NEED salt and other minerals to stay healthy. But commercial mineral blocks are expensive, and naturally occurring minerals are few and far between. So Ghanaian cattle owners make their own mineral blocks from salty soil, saving money and sparing a long trek to the nearest mineral outcrop.



Supporting local initiatives

THREE INITIATIVES, FROM different parts of the world. But they have several things in common:

- **They all are driven by livestock keepers** – not outsiders. That means that unlike outside interventions, they address the problems that the livestock keepers themselves face.
- **They are environmentally friendly.** They use local resources, avoid pollution and conserve the environment.
- **They make economic sense.** They use few costly external inputs, generate competitive levels of output, and are profitable.

There are many such initiatives around the world. But they get little attention. Politicians, donors and investors often prefer big, prestigious projects rather than building on local initiatives. Decisions about livestock development are made in capital cities, not in villages or pastoralist encampments.

Such local initiatives deserve greater recognition and support. Small-scale livestock keepers and pastoralists should be included in decision-making on issues that affect them. Those issues include the use and management of natural resources; access to land, credit and markets; intellectual property rights; research and trade priorities; and protection of the rural environment.

Putting livestock keepers at the centre of their own development requires a basic rethink of how livestock are produced. Outsiders can facilitate this process. They can help marginalized and poor livestock keepers gain recognition and support for their initiatives through networking, research, advisory services, training and advocacy.

That is what **endogenous livestock development** is all about.

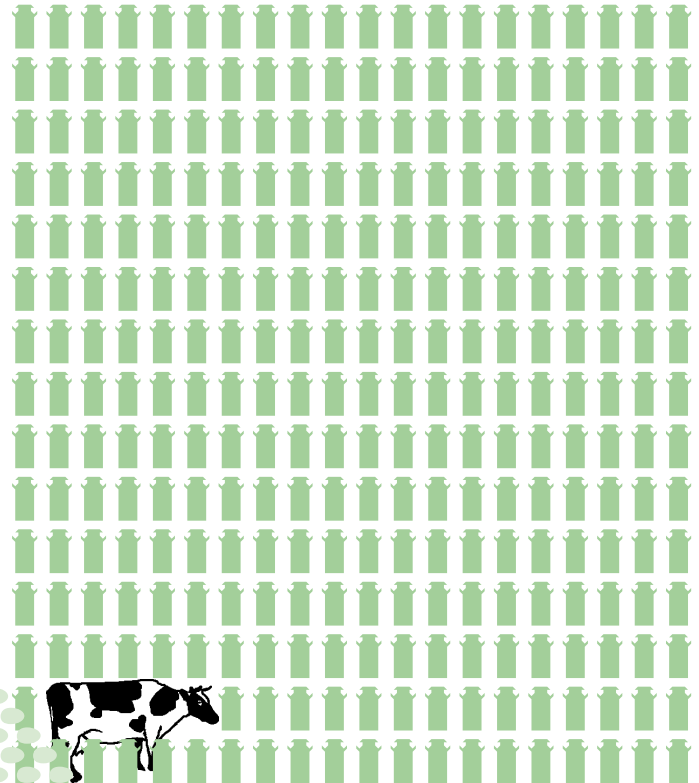
A cow is a machine to produce milk

AND A CHICKEN is an egg-laying machine. At least, that is how industrial livestock production treats them.

A black-and-white dairy cow can produce more than 10,000 litres of milk a year.

A hybrid chicken lays about 300 eggs a year – six times more than 50 years ago.

Demand for meat, milk and eggs is up, especially in fast-growing Asia. Semen and embryos from high-yielding breeds, day-old chicks and even whole production units are shipped across the globe to meet this demand.



Higher, bigger, faster... but for who?

RISING LIVESTOCK PRODUCTION is good news. But not everyone benefits from industrial-scale animal production.

As the gap between rich and poor widens, more than 850 million people remain hungry. Many of them are small-scale and marginalized livestock keepers such as pastoralists and other indigenous peoples. Disadvantaged by national policies and trade rules that are geared towards large producers, they face numerous obstacles:

- **Common land is ploughed** for crops or fenced off as nature reserves, leaving nowhere for them to graze and water their animals.
- **Investments in markets** and other infrastructure goes to the cities, not to remote livestock-raising areas.
- **Cheap imported milk** and other livestock products outcompete local products and undermine production.
- **Animal health and hygiene** regulations, such as the requirement to trace produce back to its source, make

it nearly impossible for small-scale producers to export their output.

- **Veterinarians and staff of support organizations**, trained in intensive production, know little of the problems many livestock keepers face.



The costs of factory farming

IT IS NOT only small-scale and marginalized livestock keepers who lose out from industrial livestock production. The environment, animal welfare and human health also suffer. Society, not the industry itself, bears the costs.

Environment and climate change

Intensive production needs lots of energy, water and other inputs. Rainforests are cleared to grow soybeans, which are then shipped around the globe for use in feed concentrates. Making fertilizers needed to grow feed grains emits significant amounts of greenhouse gases. Intensively kept livestock produce huge amounts of waste – which ends up in groundwater and rivers.

Biodiversity

Chicken and pig farms rely on an ever-narrowing gene pool. That is true of cattle too: Holstein cattle breeders in North America use just a few high-performance breeding bulls. By 2015, the Holstein herd may be genetically equivalent to just 65 animals.

Animal welfare

Animals spend their lives indoors, confined in small spaces. They are transported over long distances. Intensive breeding and feeding mean up to half of female turkeys have leg problems: they cannot support their own weight. Millions of “unproductive” male layer chicks are destroyed.

Animal health

Keeping many animals close together lets diseases spread. So does shipping animals around the globe. Swine fever, SARS and avian flu are recent examples.

Public health

Extensive use of antibiotics and other chemicals produces resistant micro-organisms and leaves residues in meat and milk. And it may make some human diseases untreatable.

Mobile and small-scale livestock keepers see things differently

THEIR ANIMALS FULFIL many roles – livelihood, ecological and spiritual:

Food and fibre

Milk and eggs are important sources of protein for poor livestock keepers and their customers. Skins and hides make clothes, bedding and many other items.

Draught power, transport and manure

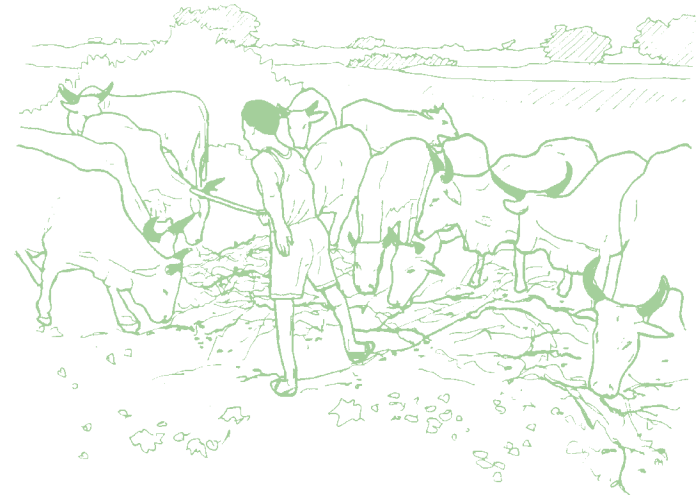
Draught animals plough more than half the farm land in developing countries. They carry loads and pull carts. Manure is an important fertilizer, and is a cooking fuel for millions.

Employment

Animals provide a wide range of jobs in transport, trading, feed supply, and processing of milk, meat, hides, wool and other products.

Cash and savings

Animals are a walking savings account. It is easy to sell a goat to get cash, or swap a chicken for goods.



Natural resource use

Covering 22% of the world's land, drylands are unsuitable for crops. Many other areas are too steep or too cold to cultivate. Livestock use them in a productive, sustainable way.

Social and cultural needs

Livestock are a vital component of many cultures. They form dowries and religious sacrifices; they provide entertainment (e.g., in racing) and enable people to show hospitality (e.g., through a shared meal) or resolve conflicts (e.g., by giving animals to a rival group).

Landscape and biodiversity

Grazing prevents meadows and steppes from reverting to bush and is vital for certain types of seeds to germinate. Animal manure fertilizes impoverished soils. A natural production cycle linking animals, manure, the soil and plants reduces the impact on the climate.



One size does not fit all

IN THE 1960s and 70s, projects transferred livestock technologies to developing countries with little adaptation. Many of these projects failed due to environmental, social and cultural differences.

In the 1980s and 90s, efforts switched to promoting “appropriate” technologies. But they too did not live up to expectations: they continued to view people as “targets” rather than as partners, and they neglected local conditions and the social dimension.



Today, in many ways we have returned to the 1960s. Industrial production systems are often transferred wholesale: entire poultry or pig enterprises are built from scratch, using breeds imported from Europe or North America.

But such systems depend on high levels of inputs – so may be unsustainable, especially in marginal areas. And unfettered by controls, they produce huge amounts of pollution and unacceptable health hazards.



We need a different approach

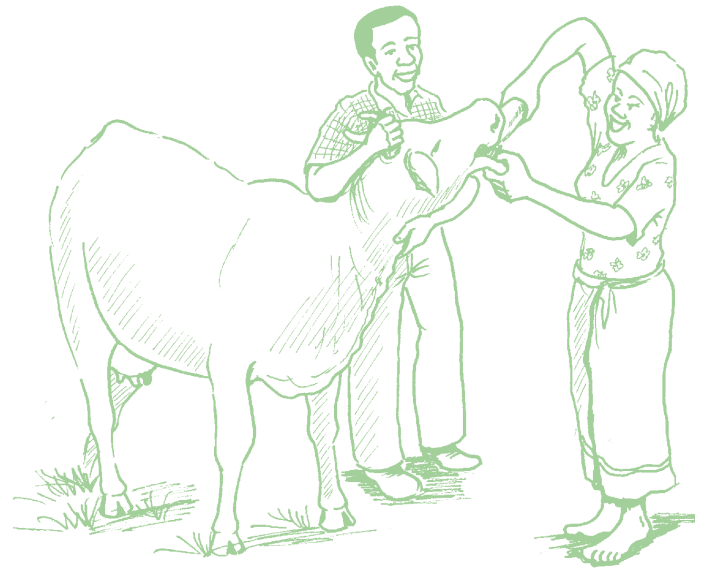
ENDOGENOUS LIVESTOCK DEVELOPMENT offers a better way forward.

The word **endogenous** means “growing from within”. Endogenous livestock development means working *with* livestock keepers, rather than *for* them.

It means supporting their initiatives, and basing development efforts on their knowledge, resources and worldviews.

It stimulates people to use their own capacities to solve problems and improve their lives.

But endogenous livestock development does not romanticize: it recognizes that local practices may in fact be harmful, and helps local people find alternatives.



Combining local and global

ENDOGENOUS IS NOT the same as “indigenous” – as in “indigenous knowledge” (the knowledge that local people have developed over time).

Endogenous development starts with indigenous knowledge, but it is not limited to it. It aims to widen people’s choices by combining the best of local and outside resources. It strengthens sustainable development efforts of livestock keepers who are neglected or disadvantaged by politics and development.

Outsiders often discount **indigenous knowledge** as “mumbo-jumbo”. But indigenous knowledge includes much that makes sense. Traditional herbal medicines are often effective, and they may even be free. Taboos on grazing particular areas allow pasture to recover. Keeping several breeds lets livestock keepers optimize production: some breeds perform well if the rains are good, while others withstand drought better.

Problems with **modern technology** often lie less in the technologies themselves but more in how they are promoted. Too often, development workers highlight the advantages (high production) but fail to mention the drawbacks (costly feed and medicines). Livestock keepers can get advice and credit for high-yielding but poorly adapted imported breeds. Governments subsidize irrigation on unsuitable land, pushing livestock out. Livestock keepers can get no support for improving their local breeds or managing their fodder resources, and governments are uninterested in maintaining pastoralism – a well-adapted way of using marginal land.

Endogenous livestock development takes the best of both local and global. It supports producers to build on what they already do, and to take advantage of their indigenous knowledge. And it also draws on modern technology where appropriate.

Components and approaches of endogenous livestock development

ENDOGENOUS LIVESTOCK DEVELOPMENT brings together various approaches used in participatory livestock development initiatives:

Handing over the stick

Outside facilitators use participatory approaches to encourage livestock keepers to define their problems from their own point of view, and to realize their potential to solve them. They then “hand over the stick” – enabling the livestock keepers to take control of the development process. This approach is very flexible and can use a whole range of methods that can be adapted as needed.

Fighting for rights

Livestock keepers rely not just on their animals; they also need grazing land, water, markets, veterinary care and information. National governments and international conventions decide on who has access to these resources, but livestock keepers – poor and unorganized – are usually

frozen out of negotiations. Non-government organizations have been helping them defend their rights and livelihoods. Prominent issues include the rights to maintain their own animal breeds (a practice that is increasingly being restrict-

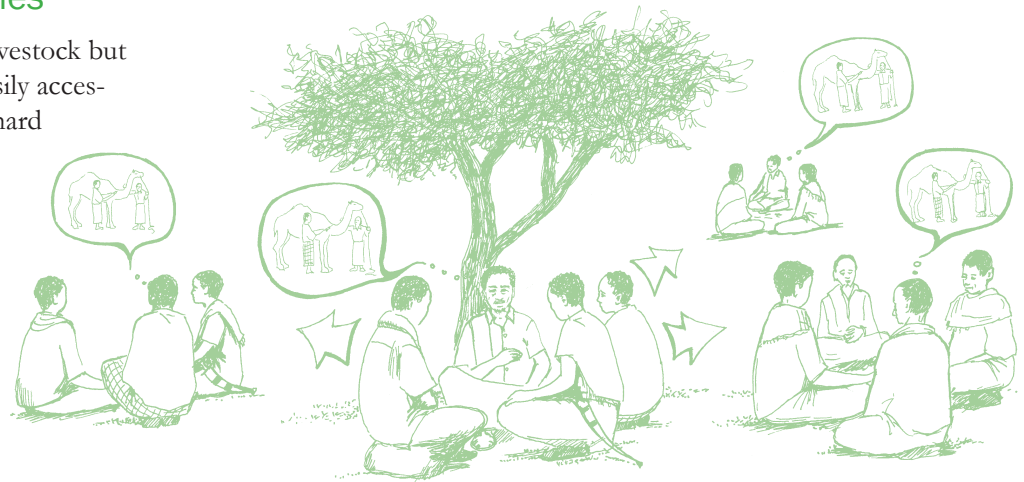


ed), use traditional grazing lands, and maintain a pastoral lifestyle. Other negotiations affecting livestock keepers concern human rights, indigenous peoples, indigenous knowledge, trade, intellectual property rights, animal health and hygiene, and the right to food.

promoting local efforts to conserve breeds, schemes to distribute breeding stock, and support for local institutions and self-help groups.

Working with communities

Remote rangelands have many livestock but few veterinarians. Even more easily accessible livestock producers find it hard to get services they can afford – veterinary care, breeding stock, credit, and so on. One way to overcome this shortcoming is to involve local people themselves in providing these services. Examples include training “paraveterinarians” to deal with simple health problems,



Ecological animal husbandry

This promotes the use of local resources rather seeking to maximize production. Livestock production in developing countries often use few outside inputs, so are ecologically sound. But they cannot meet all the standards developed for ecological animal husbandry in the developed world, cutting them off from the booming eco-market. More appropriate standards are needed that better fit developing country situations. One solution might be product labelling: a “range-fed” label would distinguish meat from pastoralists’ animals from industrial products.

Indigenous knowledge of livestock

“Ethnoveterinary medicine” and “ethno-animal science” focus on livestock keepers’ approaches to animal health and production. They cover herbal medicines to treat a wide range of ailments, housing, feed, reproduction and many other issues. It is necessary to look not only at *how* local practices work, but also at *why* people use them – which

means understanding local people’s cultural background and worldview.

Participatory innovation development

Instead of merely promoting outside technologies, how about working with local people to develop their own? After all, they understand their own situation best. Livestock keepers often have good ideas on how to improve their production systems. Researchers and development agents can help them by jointly exploring possibilities and experimenting with new ideas, combining local and external sources of knowledge to create solutions that fit the local situation.

See www.eldev.net for more information on these approaches.

Bringing it together: the Endogenous Livestock Development Network

THE FORGOING INITIATIVES recognize the value of local resources and knowledge, or seek to empower poor and marginalized livestock keepers, or both. But the organizations and individuals involved often do not know about each other and what they are doing.

To overcome this gap and further endogenous livestock development, the **ELD Network** strives to:

- Create a global platform for joint learning, collaboration and networking
- Deepen the understanding and explore the implications of endogenous livestock development
- Influence livestock-related education, research and policies.

The network aims to enhance and complement ongoing efforts rather than duplicating them.

The Network has an open structure and runs its activities on a limited budget, capitalizing on activities and resources of its members – individuals and organizations interested

in endogenous livestock development. The Network's core activities are handled by a team of three coordinators. They are guided by an international advisory board based in Africa, Asia, Latin America and developed countries.

Since its inception in 2003, the Network has grown steadily, and several development organizations have started integrating endogenous livestock development into their work.



Six focus areas

THE ENDOGENOUS LIVESTOCK Development Network has selected six areas for special attention:

Education

There is a huge gap to bridge between formal education and livestock keeping on the ground. That is true at all levels – from primary school to the training of veterinarians. Curricula need to reflect not just high-input, high-tech livestock keeping, but also low-cost, alternative approaches.

Ethnoveterinary medicine and intellectual property rights

Efforts to document local livestock practices have often neglected to validate them. And if outsiders commercialize a traditional drug, shouldn't the community who originated it also benefit from their own discovery? Helping communities build on their knowledge and preventing intellectual property piracy are key areas to address.

Climate change

Livestock keepers both contribute to climate change and are affected by it. Compared to factory farming, pastoralists and small-scale farmers living in marginal areas have relatively little impact on the climate. The Network aims to support livestock-based strategies to cope with the effects of climate change, and link initiatives to reduce livestock's contribution to it.



HIV/AIDS and other chronic diseases

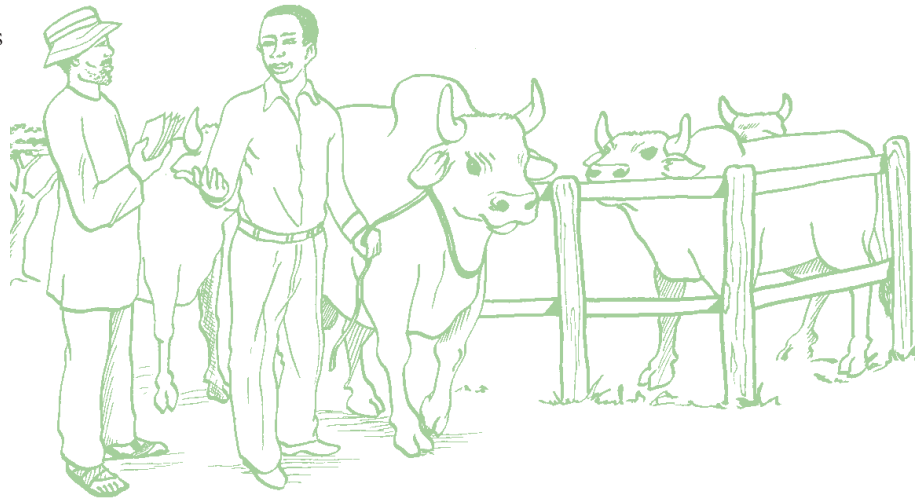
Mobile and hard to reach with conventional health services, many livestock keepers are particularly vulnerable to HIV/AIDS. Many small-scale farmers have sold their oxen to pay for medical care – meaning they can no longer plough their fields. The Network aims to support livestock-based strategies to reduce the effects of these diseases.

Markets and marketing

Livestock keepers need markets for live animals, for meat, milk and eggs, as well as for production inputs. They need to be able to compete with industrial livestock production. The Network aims to explore appropriate marketing opportunities for livestock-dependent peoples.

North–South exchange

Livestock keepers, and the organizations that support them, have much to learn from each other. The Network stimulates exchanges between groups in developed and developing countries, as well as among developing countries.



Join the Endogenous Livestock Development Network

YOU ARE WELCOME to get involved in the ELD Network if you...

- Are engaged in endogenous livestock development
- Want information about relevant activities and events
- Want to learn from others working in livestock development
- Need links for information, student internships or funding
- Are seeking ways to document and publish your experiences
- Are looking for cross-cultural South–South and North–South exchanges
- Want to apply new concepts to your own livestock development work.

Get in touch

Contact the Network coordinators at info@eldev.net.

Visit www.eldev.net

The ELDev website has information about endogenous livestock development initiatives throughout the world. Register to share your own activities.

Join the ELDev mailing list

The ELDev mailing list keeps you in touch with people-centred livestock development worldwide. Share your news and get in touch with others interested in livestock development issues. Details on www.eldev.net.

People and Livestock newsletter

Recent issues of this electronic newsletter have focused on participatory innovation development and avian flu. Short articles from contributors are welcome. Download the newsletter from www.eldev.net. Join the mailing list, and the next issue will arrive automatically in your email inbox.

More information

THE NETWORK WEBSITE, www.eldev.net, features a growing amount of information, documents and links on endogenous livestock development.

Contact info@eldev.net for further information.

Publications

Geerlings, Ellen. forthcoming. *People-centred livestock development: A tool for sustainable development? A pilot study.* League for Pastoral Peoples and Endogenous Livestock Development, Ober-Ramstadt, Germany.

Hooft, Katrien van't, et al. *Endogenous Livestock Development in Cameroon: Exploring the potential of local initiatives for livestock development.* ELD Network Series 1. Agromisa, Wageningen.

Köhler-Rollefson, Ilse. 2007. *Endogenous versus globalized: An alternative vision of livestock development for the poor.* Discussion paper. League for Pastoral Peoples and Endogenous Livestock Development, Ober-Ramstadt, Germany. www.pastoralpeoples.org/docs/endogenous_vs_globalized.pdf

Network coordinators and advisory group

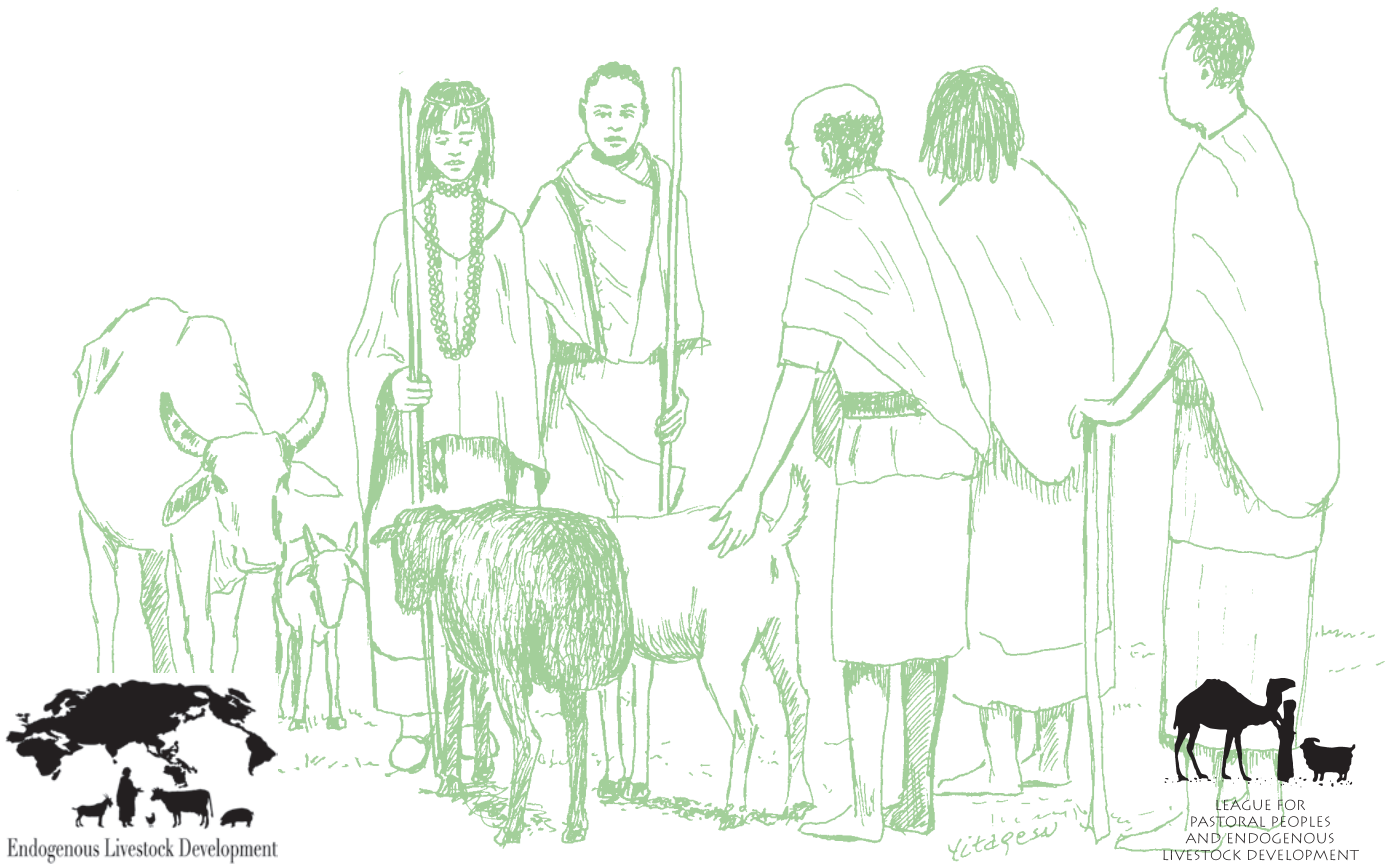
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