



Pastoralism & the SDGs

How supporting pastoralism can help realise the Sustainable Development Goals

A waterpoint in Laisamis, Marsabit County, Kenya, during dry season, 2012.
© Petra Diltthey, ethno e-empowerment (eeem.org).



Introduction

Sub-Saharan Africa's drylands, that occupy about 60% of its land area, are home to over 110 million (agro)pastoralists.¹ Because of their mobility, these (semi)nomadic livestock keepers can make effective use of the scarce and dispersed pasture and water resources in the dryland areas, a large part of which is unsuitable for crop production. These extensive livestock systems can take various forms, from complete nomadic to more sedentary types of pastoralism that also integrate crop farming (agropastoralism). However, all types are characterised by seasonal migratory patterns (also referred to as transhumance) driven by the herders' desire to access areas of prime pasture and water for their animals.

Even though pastoralism is assessed as being 50–90% more efficient than sedentary livestock systems (ranches) under similar dryland conditions², pastoral areas are characterised by a high level of poverty. A long history of marginalisation, adverse government interventions that promote sedentarisation, expansion of cropland and privatisation of resources has blocked progress/opportunities for sustainable development of the pastoral sector. Climate change threatens to worsen this situation. The higher temperatures, increased variability in rainfall quantity and distribution, and higher frequency and intensity of extreme events (droughts and floods) will significantly impact the quantity and quality of natural resources that form the backbone of pastoralism.

¹ De Haan C (ed.). 2016. Prospects for livestock-based livelihoods in Africa's drylands. World Bank Studies. Washington DC.

² De Jode H. 2010. Modern and mobile – the future of livestock production in Africa's drylands. International Institute for Environment & Development (IIED) and SOS Sahel International.

This historic neglect also means that the value of pastoralism is insufficiently understood and recognised. The contribution of the pastoral sector to the agricultural Gross Domestic Product (GDP) ranges between 15 and 40% in dryland countries. Beyond this economic benefit (that is often underestimated), pastoralism also has a variety of other social and environmental benefits that are more difficult to measure, including providing employment, natural fertiliser, biodiversity management/conservation, milk and meat for consumption, insurance and cultural values.

In order to achieve the Sustainable Development Goals (SDGs), the 17 universal goals aiming to achieve sustainable transformation of the world by 2030, it is essential that tailored interventions are in place that support the sustainable development of pastoral areas. With the right policies and practices in place, pastoralism can be a highly productive and adaptive production system that is resilient to climate change, can support food



A Fulani pastoralist is milking his cows in the morning, Woundé, Senegal, 2018. © Petra Diltthey, ethno e-empowerment (eeem.org).

security through meat and dairy products, and can provide income and employment to dryland communities.

This paper looks at the SDGs most relevant to the pastoral context, and assesses for each of them the main challenges as well as the steps needed to ensure that pastoralism can contribute to achieving the SDGs. These approaches are supported by concrete examples of interventions, provided by various CELEP members.

Poverty & Food Insecurity



Of the 100 million people in sub-Saharan Africa depending on livestock for their livelihoods, about 80% live below the poverty line.³ This is in stark contrast to the economic benefits provided by pastoralism.

Animals are a crucial part of people's livelihood in the drylands; they serve as assets and are often referred to as "walking bank accounts", meaning that they enable pastoralists to save money and sell (part of) their animals whenever they need money, which can also help them to cope better with shocks. Next to income and employment, they provide numerous other products and services including nutritious meat and dairy products, labour (traction for agriculture, draught power and transport), manure to fertilise crops, hides and skins, and cultural and social assets.

However, for various reasons, this potential of pastoralism is not fully realised, and a large proportion of pastoralists remain poor. Poverty among pastoralists has many dimensions, amongst which the temporal is an important one: shocks, such as droughts, can push pastoral households into poverty for a number of years, until their herds are rebuilt. During prolonged droughts, prices of animals drop as a result of deteriorating body condition, whilst at the same time staple foods increase in price. This severely affects the livelihoods of pastoralists with few alternative income sources and no savings (i.e. small herds).

Chronic poverty is widespread, with pastoral families often not having enough animals, or not using them in a productive way, to keep the households out of poverty. Households that lose their animals entirely, or that move to settlements to find other forms of employment, risk being worse off. Programmes that encouraged settlement of pastoralists have mostly been unsuccessful, leading to higher levels of poverty.⁴ Other factors that contribute to poverty are

³ De Haan C (ed.). 2016. Prospects for livestock-based livelihoods in Africa's drylands. World Bank Studies. Washington DC.

⁴ Little PD, McPeak JG, Barrett CB & Kristjanson P. 2011. Challenging orthodoxies: understanding poverty in pastoral areas of East Africa. Economics Faculty Scholarship. 83. <https://surface.syr.edu/ecn/83>.



Borana pastoralist with dead and dying newborn goats during drought, Marsabit County, Kenya, 2016. © Petra Dilthey, ethno e-empowerment (eeem.org).

political marginalisation, loss of pastoral land, and conflicts.

To realise SDG 1 (end poverty in all its forms everywhere) in pastoral areas, one has to take into account these many factors that lie at the root of poverty among pastoralists. In order to be successful, interventions have to target enhanced resource management and land rights, livestock marketing, education, service delivery, infrastructure development, adaptation actions, safety nets, employment and empowerment. These different dimensions will be further elaborated in the following sections.

At the same time, such interventions can play an essential role in realising SDG 2, ending hunger and malnutrition. Livestock products deliver nutrient-dense sources of energy with high protein content. Multiple studies have shown the positive impact of animal source foods on the diets of women and children. Next to providing proteins and energy, meat and dairy are important sources of micronutrients.⁵ A study on the nutritional status of children in northern Mali pointed out

Concern's integrated surge models to tackle malnutrition, improve pastoralist livelihood and build resilience in Marsabit County, Kenya

In order to address the prolonged drought in the Horn of Africa and help pastoralist communities to improve their resilience, Concern's programme in Marsabit County (Kenya) has been focusing on integrated programmes addressing malnutrition and access to water and seeking to improve the livelihood of pastoralist communities through comprehensive livestock interventions based on the provision of basic services. Two innovative approaches are used: the Livestock Surge Capacity Model and the E-Wallet mechanism. The surge model is an emergency response system that works with an early warning mechanism to ensure adequate and timely response, making services like healthcare, emergency food, veterinary services and production support adaptive to the highly seasonal and mobile pattern of pastoral production. The model is used together with the E-wallet, a market-based approach to increase access to veterinary drugs and feed during the dry season. Vouchers are distributed to vulnerable households, helping them to buy high-quality drugs during critical periods.

that children of mobile pastoralists had a better nutritional status than children of sedentary crop farmers.⁶ As malnutrition is mostly seasonal and linked to droughts, priority needs to be given to contingency planning and disaster risk reduction (DRR). This needs to be accompanied by building strong value chains, ensuring a more stable supply of milk, stimulating local dairy processing and marketing, improving health services for both humans and animals, and enhancing awareness on nutrition and child-feeding practices among households.

⁵ Neumann C, Harris DM & Rogers LM. 2002. Contribution of animal source foods in improving diet quality and function in children in the developing world. *Nutrition Research* 22: 193–220.

⁶ Pedersen J & Benjaminsen TA. 2010. Food security and pastoralism in the northern Sahel. In: Bates DG & Tucker J (eds), *Human ecology: contemporary research and practice* (New York: Springer), pp173–186.

Eeem.org – a digital approach to food security for pastoralists



Members of the Naning'oi Women's Group with barefoot teacher equipment (tablet and solar charger to be mobile and independent), Loiyangalani, Marsabit County, Kenya, 2016. © Petra Dilthey, ethno e-empowerment (eeem.org).

Together with the Naning'oi Women's Group in Loiyangalani, northern Kenya, the German NGO up4change developed since 2012 the eeem.org (Ethno E-Empowerment) approach. This multimedia learning methodology brings together traditional and anthropological knowledge, filmmaking experience and latest technology so that pastoralists can learn basic reading and calculation to acquire necessary business and life skills.



EeemBook "Animal Health" developed by eeem.org with support of VSF Germany, 2015. © Petra Dilthey, ethno e-empowerment (eeem.org)

The various eeemBooks address topics such as the money economy, M-Pesa, village community banking, animal health, drought cycles and natural resource management as well as complementary livelihoods such as fodder production and kitchen gardening. To tackle the problem of food insecurity during severe droughts, the eeemBook on drought resilience recommends selling sufficient animals at an early stage of the drought and saving money on M-Pesa accounts, which enables the pastoralists to buy food if necessary and to restock when appropriate.

Climate Change & Sustainable Land Use



Dryland areas are considered as climate "hotspots", meaning that they will experience the impacts of climate change earlier and more profoundly than in other areas.⁷ The more erratic and variable rains will lead to a change in spatial and temporal distribution of water and grazing land, and to longer periods of scarcity. Pastoralists' dependency on these climate-sensitive natural resources makes them very vulnerable to climate change. As mentioned in the introduction, pastoral systems are relatively well adapted to changes in the availability of these natural resources, as pastoralists can move with their herds to places where water and pasture resources are best. This mobility, which has allowed pastoralists to successfully adapt to changing conditions for centuries, is however increasingly under pressure, and will therefore not suffice to cope with the more extreme climatic conditions.

At the same time, pastoralism is a highly effective production system, with low use of external inputs and optimal utilisation of the available resources. Compared to intensive livestock production, pastoralism produces less greenhouse gases (because of its low use of external inputs) and is the most efficient way to produce food in the dry areas.

To achieve SDG 13 (Climate Action) and SDG 15 (Life on Land) in pastoral areas, it is key to safeguard mobility and secure access to grazing lands, anchored in a participatory natural resource management system which should give traditional institutions a central role in managing resources and formulating contingency plans and longer-term adaptation or DRR strategies. These plans need to ensure rapid response in case of an upcoming drought (through e.g. mobile veterinary teams, feed reserves etc) and also look at longer-term options that strengthen pastoralist resilience, including rangeland management, conflict resolution, employment opportunities and market development. Pastoralist communities and civil society organisations (CSOs) need to be included not only in making DRR or adaptation plans, but

⁷ Niang I, Ruppel OC, Abdrabo MA, Essel A, Lennard C, Padgham J & Urquhart P. 2014. Africa. In: Climate change 2014: impacts, adaptation, and vulnerability. Part B: Regional aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (Cambridge: Cambridge University Press), pp1199–1265.



Animal health worker Naida is vaccinating a herd on behalf of VSF Germany in Marsabit County, Kenya, 2012. © Petra Dilthey, ethno e-empowerment (eeem.org).

also in general policy formulation to ensure a strong and accountable governance and improved service delivery in pastoral areas.

KDF and VSF-Belgium partnering for enhanced conflict resolution and land management mechanisms

Karamoja Development Forum (KDF) aims for a society in which the needs of pastoralists are met and their rights respected. With research and advocacy as a core strategy, KDF endeavours to provide a platform that enables pastoralists to spearhead and shape their own development in a bid to promote peaceful and inclusive societies that provide local and long-lasting solutions for sustainable development. KDF is working with VSF-Belgium in Karamoja on a Conflict Management and Peace Building project (COMPEK) to transform conflicts related to land and mineral rights as well as to promote equitable access to and use of natural resources. Local community institutions for the protection of land, grazing and mineral rights in Moroto have been established and strengthened. Through the promotion of best practices for protection of communal land rights and as a result of institutional capacity strengthening, Rupa Community Development Trust (RUCODET) has been able to revert a land grab, to survey and register land, to negotiate for benefit sharing with a mining company, and to provide a platform for dialogue within their community. The Kobebe Rangeland Association, which was established under the COMPEK project and represents local pastoral communities in Rupa, is establishing mechanisms for sustainable access to, use and sharing of water and pasture resources in the Kobebe grazing area. The association now works with and has the support of the Rupa Sub County.

SNV's innovations in climate-smart practices and civil society engagement

In the MODHEM (Mobile Data for Moving Herd Management) project in Burkina Faso and STAMP (Sustainable Technology Adaptation for Mali's Pastoralists) project in Mali, both funded by the Netherlands Space Office, SNV works with private-sector partners and pastoralist organisations to set up a mobile information system that provides pastoralists with up-to-date and location-specific information on pasture and water availability, weather forecasts, herd concentration and market prices – all easily accessible through mobile phones. The information is derived from a combination of data collected in the field and from geo-satellites and supports pastoralists in planning their transhumance and selling their animals at a good price, which enables them to better adapt to dry periods.



Through mobile phones, young pastoralists can easily access information, Marsabit County, Kenya, 2013. © Petra Dilthey, ethno e-empowerment (eeem.org).

In Burkina Faso and Kenya, SNV also works with pastoralist CSOs through the Voice for Change Partnership Programme. SNV supports the CSOs through strengthening their advocacy skills, thematic knowledge, leadership and organisational sustainability, and works with the International Food Policy Research Institute (IFPRI) to provide the CSOs with latest research findings that underpin their advocacy messages. Equipped with sound evidence and skills, the CSOs work towards including pastoralists' needs in (climate-related) plans and policies, enhancing pastoral land management and mobility, strengthening customary institutions and ensuring improved service provision.

Tailored service provision and market systems



The historic marginalisation of pastoral areas has led to weak or sometimes even non-existent service delivery by both government and private sector. Lack of physical infrastructure, including roads, electricity and market infrastructure, has isolated pastoralists even further and has inhibited trade and private-sector development in the already remote areas. Whenever services are available, they are often of poor quality, do not manage to reach all the people (poor accessibility) and are not adapted to their way of living. Especially education is very much centred on a sedentary lifestyle and does not include or build on indigenous knowledge that could help young people base a solid livelihood on pastoralism. Literacy rates among pastoralists have not changed much over the last 50 years and are significantly lower than in other groups of the society, illustrating that there is a need to fundamentally change educational services, as the existing system and “solutions” have failed.

SDG4 promotes inclusive and quality education for all, as well as lifelong learning. The pastoral context harbours a complex relationship between modern education, pastoralist livelihoods and aspirations, and national development priorities. Research on this topic has tended to vary between extremes. Some argue that pastoralists need to

be integrated into formal, sedentary schooling systems. Others argue that educational provision should be mobile and more informal, and focus on constraints and needs identified by pastoralist communities themselves. Education policy actors have shown consistent reluctance to dedicate resources to understanding, and reconciling the dynamics of education service supply and learner demand in the contexts of rapidly changing rural livelihoods.

In order to make education effective in pastoral areas, it needs to go beyond improving access and to consider relevant content and delivery modalities that can enable pastoralists to thrive, to be resilient and to prepare for employment opportunities in or beyond livestock-keeping. SDG 4 stresses the need for tailored education that appreciates cultural diversity and its contribution to sustainable development, which can be realised through integrating pastoralism into the school curriculum and addressing educational needs such as literacy, numeracy, business skills and mobile technology. Vocational training programmes tailored to the pastoral lifestyle can provide youth with market-relevant skills connected to key opportunities along the livestock value chain. These opportunities are ample, yet still very much underdeveloped.

In order to achieve SDG 8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all), a variety of economic activities can be developed that are connected to pastoral livestock-keeping, including input delivery, veterinary services, trading, transport, processing and infrastructure. Emphasis needs to be put on stimulating economic activities particularly suitable for women, such as



Many pastoralist children in Africa have to help their parents with herding and often cannot attend normal schools. Fulani boy in Senegal on the border to Mauritania, 2018. © Petra Diltthey, ethno e-empowerment (eem.org).



Surma boy who takes care of his animals in a cattle camp in Kibish, South Omo valley, Ethiopia, at the border to South Sudan, 2019. © Petra Diltthey, ethno e-empowerment (eem.org).

small-scale dairy processing, fodder production or animal fattening. Livestock markets now already form trading centres in dryland areas, bringing together pastoralists, livestock traders, service providers and vendors of food and other essential products. Whereas they are now mostly basic in nature, these markets have the potential to develop into vibrant hubs that provide ample employment opportunities – if they are well connected and well managed. Including the local communities in the management of livestock markets has proven to enhance market functioning and profitability.⁸ As also emphasised in SDG8, such productive activities need to be supported by policies that support entrepreneurship, enterprise development, job creation and access to financial services.

Strong livestock markets for resilient communities in northern Kenya – SNV

The co-management model that SNV has implemented in over 40 livestock markets in Kenya's arid and semi-arid lands ensures shared management of the market by authorities and the community. Putting more responsibility in the hands of the community has led to significant improvements in the market functioning, infrastructure, security and information provision, and attracts more buyers, service providers and other businesses. The markets function as a hub, attracting a variety of goods and services, which offers the local population (especially women) opportunities to engage in income-generating activities. At the onset of a drought, pastoralists can more easily sell some of their livestock, and the vicinity of the market ensures they do not have to cover long distances to sell their (sometimes weakened) animals.



Lolkuniani livestock market, one of the first markets where SNV has supported implementation of the co-management model, in Samburu County, northern Kenya. © Caroline te Pas

Eeem.org – true-to-life interactive multimedia learning for pastoralists

The NGO eeem.org addresses functional literacy and numeracy, empowerment (especially for girls and women) as well as improvement of market competence and strengthening of resilience. To achieve this, it involves local communities, elders, young warriors, women and children in the production of the learning content. This bottom-up approach ensures local ownership of the materials. eeem.org consists of: ethnographic video and photo materials, eeemBooks with true-to-life content to playfully learn basic reading and calculation to acquire necessary business and life skills, tablets with solar charging devices to be mobile and independent, and “barefoot” teachers as multipliers. As the eeemBooks can be used offline, connectivity issue is not a problem. The pilot project funded by the German Federal Ministry for Economic Cooperation and Development (BMZ), which started in Kenya's Marsabit County in 2016, has showed positive impacts in terms of improved business activities, enhanced revenues, a boost in fodder production and a more than doubling of sales in women's petty trade.



Barefoot teacher Danila teaching the eBooks to members of her community, Loiyangalani, Marsabit County, Kenya, 2017. © Petra Dilthey, ethno e-empowerment (eeem.org).

⁸ Crane TA, Lugusa K, Rademaker I, Dortant I. 2016. Market-oriented interventions and climate resilience in dryland agro-pastoralism. ILRI Policy Brief 21, November 2016.

Inclusion and (gender) equality



SDG 10 (Reduce inequality within and among countries) aims to achieve equal opportunities and social, economic and political inclusion of all, irrespective of age, ethnicity, origin, gender, economic or other status. Being closely linked to other SDGs discussed in this paper, reducing inequalities contributes to poverty reduction, food security, economic opportunities, better service delivery and enhanced resilience to (climate) shocks.

The historic marginalisation described in earlier sections has led to lagging development of pastoral areas, with low service provision, poor (market) infrastructure and exclusion of pastoralists from decision- and policymaking. As a consequence, poverty rates are high, and pastoralists see their livelihoods being further compromised by privatisation or fragmentation of their lands, disregard of their land-use rights and a general negative disposition towards their mobile lifestyle, that is often regarded as “backward”. Especially neglect of land-use rights has led to conflicts and displacements.

Next to pastoralism being marginalised as a group, also within pastoral societies there are inequalities at different levels. The number of animals per person is, for example, very skewed, with a few wealthy pastoralists (often living in cities) owning large herds, but the vast majority having hardly enough animals to sustain themselves. Whereas studies suggest that an estimated 2.5–4 TLU (Tropical Livestock Units⁹) per capita are needed to stay above the poverty line (and have a sufficient buffer against shocks), on average, pastoralists have only 1.2–2 TLU per capita.¹⁰ Within the pastoral communities, women are also often marginalised: lack of control over livestock assets

and income, low participation in market activities and decision-making, and traditional beliefs that promote early marriage and no schooling are root causes of gender inequality.¹¹

To ensure improved equality, it is vital to give pastoralists, and especially women, a voice in decision-making processes, stimulate women’s economic participation and empowerment, enhance access to (tailored) education (see SDG 4) and support policies that ensure (land-use) rights of pastoralists.



Members of a women-led dairy cooperative in Wum, Cameroon © Caroline te Pas

Fighting for pastoral rights in Tanzania – IWGIA

As part of its efforts to protect and defend indigenous peoples’ rights, IWGIA (International Work Group for Indigenous Affairs) is working closely with pastoralist communities in Kenya and Tanzania. In Tanzania, pastoralists face increasing challenges, particularly related to land grabbing and violation of land rights. Whereas in other countries, land grabbing is often linked to private companies, in Tanzania the main threat comes from wildlife authorities aiming to expand national parks. This has led to the forced eviction of Maasai pastoralists from their land and even the burning of their houses, despite the fact that the communities have lived there for centuries and have traditional rights to the land. As a response, IWGIA – together with local and international partners – has put pressure on the international community and the Tanzanian Government to stop violation of pastoralists’ rights. IWGIA also works on empowerment of pastoralist women by supporting the establishment women-based organisations and networks that influence decision-making and development in their area.

Authors: Caroline te Pas, Petra Dilthey, Uli Schwarz, Ann Waters-Bayer.



About CELEP

The Coalition of European Lobbies for Eastern African Pastoralism (CELEP) is an informal advocacy coalition of European organisations, groups and experts working in partnership with pastoralist organisations, groups, and experts in Eastern Africa. They collaborate to encourage their governments in Europe and Africa and the EU to explicitly recognise and support pastoralism and pastoralists in the drylands of Eastern Africa. For more information, contact the CELEP focal point Koen Van Troos at k.vantroos@vsf-belgium.org or the regional focal point Ken Otieno at kenotieno@reconcile-ea.org. www.celep.info.

⁹ Tropical Livestock Unit (TLU) = 250 kg liveweight (adult bovine); non-lactating cow = 0.7, sheep or goat = 0.1, camel = 1 TLU.

¹⁰ De Haan C (ed.). 2016. Prospects for livestock-based livelihoods in Africa’s drylands. World Bank Studies. Washington DC.

¹¹ Njuki J & Sanginga PC. 2013. *Women, livestock ownership and markets: bridging and gender gap in eastern and southern Africa*. London: Routledge.