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Pastoralists as family farmers: some more details¹

In the definition of family farmers for the International Year of Family Farmers (IYFF) in 2014 and now for the United Nations Decade of Family Farming 2019–28, pastoralists are mentioned as a group needing specific attention. Despite this recognition, most statements, papers and information about family farmers refer primarily to small-scale crop farmers. As organisations supporting, working with or representing pastoralists, we want to draw attention to the importance of including pastoralists within discussions and interventions in family farming, also within the Decade. Here, we outline: i) the features of pastoralists that identify them as family farmers; ii) the importance of pastoralists for the wellbeing of nations, people and the environment; iii) specificities of pastoral farming systems; and iv) major challenges and emerging opportunities for pastoralists. To conclude, we propose how pastoralists' issues could be incorporated into policy advocacy activities during the Decade.

1. Pastoralists as family farmers

Pastoralists are people who raise livestock or (semi-)wild animals on rangelands or natural grasslands in production systems that are based on different forms and magnitudes of livestock mobility (such as seasonal transhumance), and thus differ from more sedentary or intensive forms of livestock production, such as feedlots for fattening. The term “pastoralists” is used here to refer to nomads, transhumant herders, family-based ranchers and agropastoralists. These people manage diverse species of grazing and browsing animals such as sheep, goats, camels, cattle, yaks, llamas, reindeer, horses and donkeys. As in the case of small-scale crop farmers, the production unit – in this case, the herd of livestock – is managed by a family and relies mainly on family labour. Different family members are responsible for different components of the farming system. In pastoralism, as in family-based crop farming, the men, women, elders, youth and children all play important economic, social and cultural roles that are closely intertwined. The pastoralist community and herds evolve together and combine also environmental and reproductive (e.g. child care, socialisation) functions. Like other family farmers, pastoralists make intensive use of indigenous, traditional and local knowledge that links to ecological and social systems and networks. They combine a subsistence orientation (milk, meat, in some cases also blood) and a market orientation, earning income from dairy products (sold mainly on local markets) and livestock (sold on local, national and cross-border markets). These features of pastoralism fully reflect the definition and spirit of family farming used by the Food and Agricultural Organisation of the United Nations for the IYFF and for the United Nations Decade of Family Farming (www.fao.org/family-farming/background/en).

¹ This paper supplements the 4-page brief “Pastoralists as family farmers” (available also in French and Spanish; see <http://www.celep.info/pastoralists-as-family-farmers>) prepared by the Coalition of European Lobbies for Eastern African Pastoralism (CELEP), the International Land Coalition Rangelands Initiative (ILC-RI) and the International Support Group (ISG) for the International Year of Rangelands & Pastoralists (IYRP) as an input for the United Nations Decade of Family Farming. It was compiled in 2019 by Ann Waters-Bayer and revised in the light of inputs and comments from (in alphabetical order) Alhassan Jaoji, Anu Verma, Brigitte Thébaud, Ced Hesse, Elvira Maratova, Engin Yilmaz, Fiona Flintan, Kathrine Johnsen, Koen Van Troos, Maryam Niamir-Fuller, Michael Ole Tiampati and Ruijun Long.

The specific agroecological conditions of the areas where pastoralists live – the rangelands (grasslands, savannas, dry forests, tundra, steppes, deserts, mountain pastures and similar ecosystems) – define the type of family farming that can be practised sustainably. The pastoralists' grazing and/or browsing livestock can make productive use of natural vegetation in marginal areas that are too dry, too high, too cold, too steep and/or too infertile for sustainable crop production. Vegetation growth in the rangelands depends primarily on water and nutrient availability and temperature, and varies greatly over space and time. It is also influenced by the pastoralists' management of the grazing and/or browsing animals and of the vegetation, e.g. using fire to stimulate new vegetative growth and to kill parasites. They use a diversity of water sources, such as rivers, lakes, natural ponds, dams, wells and boreholes, that are usually shared by several herds and, in the case of surface water, also wildlife. Availability of water for the livestock determines whether the grazing resources in the area can be used. Pastoralists make the best possible use of these heterogeneous and dispersed rangeland resources through periodic (often seasonal) grazing, complex access and governance arrangements, and mobility – bringing their herds to the most nutritious available pastures with lower risk of animal disease at a given point in time. Pastoralists are adept risk managers, able to cope with and adapt to the often unpredictable and variable physical environments in which they live.

Among family farmers, there is a large spectrum of farming types between solely animal farming at one end to solely crop farming (field, tree or garden crops) at the other. At the animal-farming end of the spectrum can be found highly mobile to more sedentary systems that also include some cropping, either opportunistically or on a regular basis (agropastoralism). Such integration is increasing among pastoralists seeking to diversify their livelihoods and spread risk in the face of new challenges such as climate change and conflicts. Also many crop farmers diversify into livestock keeping. The pastoralists who do some cropping and the crop farmers who keep some livestock may sometimes appear to have similar farming systems, but the difference is that the former generally give priority to their animals while the latter generally give priority to their crops.

In many parts of the world, pastoralists' livestock provide important inputs for crop farming, such as manure to fertilise the soil and animal traction for ploughing either in the pastoralists' fields (if the family is engaged in cropping) or in the fields of other farmers, in addition to transporting crops and other goods and providing financial security and insurance. Many crop farmers invest their savings in livestock, often bought from pastoralists, and also buy live animals from pastoralists to slaughter for local festivals and ceremonies. In many countries, pastoralists' herds graze the stubble on harvested cropland and thus speed up the process of decomposing the plant biomass into manure, while producing animal-source food at the same time. Such mutual benefits of livestock-keeping and crop farming by two different groups of specialists using the same land areas at different times of the year with low levels of external inputs are often underestimated.

2. Importance of pastoralists for wellbeing of nations, people and environment

There is no reliable information about numbers of pastoralists. Current overall estimates range between 200 and 500 million pastoralists that live in about 75% of the countries in the world, by far the majority in Africa, Asia and Latin America, but there are also pastoralists in North America, Australia, Europe and the Circumpolar Arctic. These numbers include nomads, transhumant herders, family-based ranchers and agropastoralists (Johnsen *et al* 2019).

Pastoralists can produce food on areas of land where other ways of producing food – whether from trees, crops or animals – make little economic or ecological sense and would not be as productive

with the same low level of external inputs. The grazing animals convert vegetation that cannot be eaten directly by humans into high-value foods: meat and various dairy products. Livestock that graze non-arable rangelands do not compete with humans for food. Moreover, pastoralists' livestock are seldom or never fed with grains that could be used as food for humans.

The food produced from animals provides important energy, proteins and micronutrients for human diets (Neumann *et al* 2002, FAO 2013). Animal protein is rich in amino acids and particularly important for the nutrition of women and children. The calcium and vitamins in milk play a determining role in bone growth and health of children. The lower reliance on veterinary products and antibiotics in pastoralism also provides healthier and higher-quality food than in more intensive animal production systems. These valuable foods are consumed not only by the pastoralist families but also by other families, including those of crop farmers, in the villages and towns in the drylands as well as by people in the country's major cities. In many dryland countries, the products from pastoral herds are a major source of the nation's food. Especially the meat consumed by both rural and urban consumers in countries along regional livestock value chains comes mainly out of pastoral production systems. Moreover, in most areas, the local pastoral products are available at much lower prices than those of animal-source food products imported into these areas and can thus be afforded by poorer families.

In addition to food, pastoralists produce leather, fibre, manure, and livestock sold for animal traction (ploughing, carts) and riding. Some pastoral products such as live animals, milk products and meat are also shipped, trucked or trekked to other countries and are thus a source of foreign exchange. All of these products support the domestic economies of the countries in which pastoralism is practised – as said, in 75% of the countries in the world. In West Africa, by selling animals and purchasing goods and services while on the move, transhumant pastoralists trekking from the Sahel to coastal countries make a considerable economic contribution that benefits directly the communities living in the hosting areas (Thébaud *et al* 2018).

The contribution of the pastoral sector to the agricultural Gross Domestic Product (GDP) ranges between 15 and 40% in dryland countries and goes as high as 60% of the agricultural GDP in countries that consist primarily of rangelands, such as Chad, Mauritania and Sudan (de Haan 2016).

Pastoralism provides a source of livelihood for the pastoralist families, primarily through the sale of animals and milk products. The latter are extremely important for the income of the women, who – in many countries, e.g. in Africa – are traditionally responsible for processing and selling dairy products and have full control over that income. Animals are the family's bank account, with interest in the form of offspring. Ownership and rights of use over the animals are often shared among different members of the family, making the sale of an animal a family affair, especially when large stock is concerned. In other areas, such as among some reindeer herding communities in northern Europe, each family member owns individual animals and their offspring within the herd and can make individual decisions about selling them.

Pastoralism is also crucial to build strong and resilient rural economies. It provides a source of livelihood and employment for the various people engaged in economic activities to provide inputs and services for pastoralists and to process and trade their products. Income and employment opportunities related to pastoralism form one set of factors that maintain towns in the rangelands and thus keep remote rural areas populated. Herrero *et al* (2009) estimate that as many as 1.3 billion people are employed in value chains of livestock products worldwide. A large proportion of these products come from pastoralism.

Pastoralists provide a number of ecosystem services and environmental benefits (Ouedraogo & Davies 2016). Their land-use and resource-management practices maintain landscapes, ensure ecological connectivity between habitats including protected areas, and conserve plant and animal biodiversity. Seed dispersal by mobile livestock via their dung or coat favours long-distance migration of grasses, shrubs and trees and, therefore the restoration of rangelands. Many dryland ecosystems have higher species diversity as a result of being grazed by livestock. This plays a role in supporting habitat resilience. The biodiversity in the rangelands in terms of both species and habitats has co-evolved with and depends on grazing animals. Pastoralists have maintained indigenous breeds of livestock that are hardy because they have developed mechanisms of adaptation to harsh environmental conditions. Mobile pastoralism on unfenced rangeland is highly compatible with wildlife and other forms of nature conservation (Niamir-Fuller 2016).

Through the grazing and movement of their herds, also in many cases in harvested and fallow fields in crop-farming areas during the dry season, pastoral land-use systems contribute to nutrient cycling and nutrient transfer from rangeland to cropland, and control bush encroachment. In areas like the Mediterranean, grazing by pastoralists' herds reduces the risk of uncontrolled bush fires. The rangelands also have important ecosystem functions in storing carbon, forming soil and regulating water cycles.

Because of its extensive nature and its low dependence on external inputs – moving animals to the grazing resources instead of harvesting feed and transporting it to the animals – pastoralism uses less energy derived from fossil fuels and produces less pollution than do intensive farming systems. Pastoralism also causes less greenhouse gas emissions related to transporting feed and producing and using chemical fertilisers to cultivate forage or feed for intensive livestock-production systems.

Traditional ecological knowledge built up and accumulated over time gives pastoralists the ability to accurately translate what is happening and a sense of how the ecology and weather patterns are changing, thereby enabling them to situate this knowledge in action. Their finer scale of understanding of local conditions can play an important role in multistakeholder actions for nature conservation, rural planning, and climate-change mitigation and adaptation.

3. Some specificities of pastoral farming systems

For pastoralists who operate at least part of the year in dry or mountainous areas, the climatic risks are higher and the environmental conditions less predictable than in better-watered areas, where most crop farmers are operating. It is primarily for this reason that pastoralists use animals in a **mobile production system** (moving animals in the rangelands through nomadism, transhumance and other forms of rotational use of the land) to make best use of ephemeral resources instead of staying in one place to grow crops or raise stall-fed animals. The mobility of the pastoral production unit – i.e. the herd – is the most significant characteristic that distinguishes it from other forms of farming.

Pastoralism is based primarily on **naturally existing vegetation** and is a more ecologically friendly and sustainable production system than high-external-input irrigated farming of annual crops or intensive livestock production. It is the most economical and ecological way of using land to produce food in dry, mountainous or cold areas.

The high level of uncertainty involved in producing food in such areas is also a reason why most pastoralists depend on a land-use system involving **common property resources** and make counter-seasonal use of arable land (grazing in seasons when crops do not grow) rather than using a relatively small area of land owned and used exclusively by a single family. In most cases, policies and

programmes that forced pastoralists to settle on individual plots and restricted pastoral mobility had serious negative effects on the wellbeing of the animals, the people and the environment (Galvin *et al* 2008). Mobility and common pool property regimes are ideal for making sustainable use of the natural resources and for dealing with climatic risks and shocks. Exclusive private or even communal tenure of a limited piece of land may not benefit a pastoralist family or community if this means that they cannot move their herds over a large and diverse area. More important than sole land ownership for mobile pastoralists are peaceful mechanisms for negotiating access to geographically dispersed grazing areas.

Another pastoralist strategy to deal with uncertainty and risk is **collective action** with other families, often sharing resources and labour, and supporting other families in times of need in reciprocal relations that build on strong social capital. Children learn from an early age the importance of working together with others not only within the family but also with other families. Several families often join forces for longer-distance migration with the herds.

4. Major challenges and opportunities for pastoralists

Today, pastoralists in many parts of the world face major challenges, which include the following:

1) Constrained mobility because of changes in land use. The mobility of pastoralists, which allowed them to act flexibly and to adapt to changing conditions in the past, is being more and more constrained. Major causes of constrained mobility are: i) spreading of small-scale rainfed cultivation into more favourable niches in the rangelands, including sometimes use of chemical herbicides that reduce the amount of crop residues available for grazing; ii) expansion of large-scale commercial investment in the drylands, e.g. for irrigated cropping in river valleys; iii) exclusion of livestock from national parks, nature reserves and areas of mineral exploration or infrastructure development, e.g. for generating wind, geothermal or solar energy; iv) changes in land tenure and access, with increasing privatisation, fencing and fragmentation of rangelands that were formerly used as common property; and v) rapid urbanisation (establishment and spreading of towns), often in areas formerly used for dry-season grazing.

These changes have led to reduction in total rangeland area and fragmentation of the rangeland; complete loss of or greater difficulty in accessing seasonal key resources or areas (e.g. wetland areas, traditional calving grounds, migration routes) and reserved grazing areas for their herds, especially during crises such as droughts, floods or frozen snow; and severe restrictions to herd movements. In addition, where seasonal transhumance involves movements into or through crop-farming areas, livestock corridors are often non-existent or blocked by cultivated fields, while infrastructure and services along the routes (e.g. waterpoints and access tracks to surface water, pastures and markets) are usually either inadequate or completely absent.

These changes in land use also lead to environmental costs for the world. Converting the range to cropland leads to soil carbon emissions and loss of biodiversity. The expansion of monoculture cropping under irrigation is a major threat to biological diversity, which has previously been maintained under pastoral use of the land. Large areas that have been converted into cropland are producing not food that can be eaten directly by humans but rather feed for the intensive livestock industry. In the past four decades in the developing world, 330 million ha of rangeland have been cultivated for this purpose, largely in Latin America (Niamir-Fuller 2016).

2) Changing land tenure. When new land-tenure policies and legislation are developed, the pastoralists' traditional rights to use land – at least at certain seasons of the year – are often not

recognised. When governments provide land to investors, the existing use of the land for grazing is not considered as “adding value” to the land. Traditional mechanisms for negotiating access to grazing have been undermined by new land-tenure legislation, which is based on concepts of private ownership and exclusive, single-purpose use of land, whereas pastoralism thrives from common property and multipurpose use of land. Also in cases where village-level planning of communal resources is promoted, pastoralists who traditionally use the resources for part of the year are often left out. Worldwide, there are frequent reports of conflicts between crop farmers and pastoralists. Reports on synergies and complementarity between the two production systems do not make it into the news, and these interactions may indeed be declining.

- 3) *Growing economic inequality.*** Within pastoralist societies, inequality has increased with increasing commercialisation of production, with a few wealthy pastoralists owning large herds and becoming even richer with the rising market demand for livestock, while the vast majority of pastoralists have scarcely enough animals to sustain their families and are becoming poorer (Aklilu & Catley 2010). Differences in access to basic services (supplementary feed in the dry season, animal health services and veterinary drugs), increasing costs associated with mobility (settling disputes, tax payments to local governments and when crossing borders) and recurrent droughts are key factors creating or exacerbating social and economic differentiation among pastoralists, leading to increasing numbers of poor and destitute households.
- 4) *Gender inequality.*** Pastoralist women have fewer rights than do men to assets such as livestock. In many pastoralist societies, women traditionally have full rights to the milk extracted from the herd to use for the family and sell on the market, but many projects that promote dairying have led to men taking over these rights. The women generally have less influence than the men in making decisions related to the community, including decisions about development activities, and less opportunity to represent their interests in public spheres beyond the pastoralist community. Pastoralist girls are still often expected to marry and bear children as teenagers and have fewer opportunities than do pastoralist boys to receive formal schooling.
- 5) *Non-existent or inappropriate infrastructure and poor access to basic services.*** Compared to crop-farming communities in more densely populated areas, both boys and girls in pastoralist communities have fewer opportunities to attend school, because the infrastructure for schooling is very poorly developed in the remote and sparsely populated rangelands. Also other forms of infrastructure and basic social and technical services, e.g. for human and animal health, clean water supply, electricity supply, good roads, marketing facilities, financial service, and information and advisory services, are often non-existent or inappropriate for mobile peoples. Even when government or private-sector projects are implemented in the rangelands to generate renewable energy through wind turbines, solar-panel farms and hydroelectric schemes, these often have a negative impact of pastoralists because their herds are excluded from grazing the project areas, and the projects provide the energy for distant consumers rather than for the local pastoralists.
- 6) *Marginalisation.*** In issues related to development and land rights, pastoralists have long suffered from political marginalisation. They are usually not well organised as pastoralist civil society to be able to influence policymakers and development planners to take pastoralists’ concerns into account. The interventions by government and international agencies have usually been conceived for sedentary populations and led – intentionally or unintentionally – to settlement and often increased impoverishment of pastoralists (Little *et al* 2011) and have given priority to intensification and industrialisation of livestock production. The policy environment

for mobile pastoralists is even less favourable than that for family farmers practising small-scale cropping. Another aspect of marginalisation is that relatively little attention is given to pastoralism and rangelands in research and university teaching in the Global South and the Global North (e.g. USA, Canada), probably because of the generally poor understanding of mobile livestock systems operating in extreme environments and of the underestimation of the value of pastoralism and rangelands.

7) Increasing insecurity. Concomitant with the growing conflicts over land use, the fact that most pastoralists do not own land also puts them in an insecure legal situation with regard to voting rights, and sometimes even their citizenship is called into question. In recent years, large-scale livestock rustling and rural banditry have made the lives of pastoralists even more insecure, particularly in sub-Saharan Africa. This has been exacerbated by the increase in the use of small arms in conflict situations. Political extremist networks are also recruiting marginalised younger pastoralists into violent activities and drug abuse.

8) Loss of indigenous knowledge. Adaptation skills are lost as herders face more restrictions on where to move, how to manage their own livestock and when/how to migrate through the landscape. Governments such as in Norway that require standardised and homogeneous herds and meat production decrease the herders' ability to build robust herds that are adapted to the landscape and resilient to climate change and extreme weather events (Johnsen 2018). Also the inappropriate curricula in the formal schooling of pastoralist children is alienating many of them from the pastoralist culture and leading to an exodus of young people from the rangelands, thus reducing the possibility of inter-generational learning about how to use these areas productively. Abandonment of mountainous rangelands by the youth is particularly a problem in Europe.

However, there are also emerging opportunities for pastoralists. The demand for animal-source foods already outstrips supply in many countries in the Global South, especially in Africa, and rising incomes – above all in urban areas – will increase this demand still further, to nearly double the current demand by 2050 (NASAC 2018). To help meet this demand coming mainly from the middle and upper economic classes of the population, pastoralism provides food produced in a sustainable manner that contributes to human health and nutrition and supports local cultural values and tastes. Most pastoral production systems do not use hormones and make only occasional use of antibiotics to treat animal diseases; they use far less pesticides, if any, compared to intensive livestock production; and they treat their animals in a humane fashion. Some countries are taking advantage of these traditional nature-based solutions by developing certification schemes. For example, “Kalahari grass-fed beef” was the first to be certified in Africa, and beef is certified as “bird-friendly” in the biodiversity-rich pampas of South America. The endangered Navajo-Churro sheep breed in the southwestern USA is marketed through the Presidia Slow Food movement (Niamir-Fuller 2016). The contribution of pastoralists to biodiversity is receiving increasing recognition. Most of the indigenous breeds of livestock and species of plants in the rangelands are valuable genetic resources for further improvement of livestock and fodder crops.

At the same time, the world is challenged by climate change, with higher variability in amount and distribution of rainfall, greater extremes in temperature and higher frequency and intensity of extreme weather events, such as droughts or floods or snowstorms. Mobile pastoral systems are more flexible than sedentary cropping systems in adjusting to such changes. Pastoralists are masters in dealing with variability and uncertainty and have demonstrated amazing resilience over the centuries – including over recent decades when it was frequently projected that pastoralists would disappear. Their skills in adapting to change are likely to become even more crucial for food

production, as they have a “sustainable alternative way of approaching environmental instability in agriculture” (Krätli *et al* 2013).

It is estimated that rangelands cover between one quarter and one half of the Earth’s land surface (McGahey *et al* 2014). Especially with a view to food and nutrition security in a world with a growing human population, pastoralists are an essential group of food producers because they can use the vast rangelands to produce food in an ecologically sustainable way.

5. Policy advocacy for and by pastoralists

Pastoralists can grasp these opportunities only if the policies and practices in their countries and regions (across national borders) allow them to maintain livestock mobility and to access the key minerals, water and grazing resources that they need at different times of the year, as well as to compete easily and fairly in markets for livestock and their products.

Pastoralist communities and civil society organisations (CSOs), including pastoralist CSOs, need to be involved in policy formulation to improve infrastructure and service delivery in the rangelands and to ensure equitable land use and good governance. There is a need for participatory multistakeholder approaches in which local pastoralists’ knowledge and institutions play central roles in land-use planning and managing natural resources, including planning for contingencies in times of emergency and planning for longer-term development that strengthens pastoralist resilience, such as facilitating negotiations over land use, improving conflict-resolution mechanisms, supporting supplementary income-generation and employment opportunities, and improving infrastructure and provision of basic services. Involvement of pastoralist organisations in transborder policymaking is also essential to enable peaceful transhumance movements and to enhance the efficiency of livestock mobility.

Policy- and lawmakers need to acknowledge the benefits of pastoral mobility and facilitate this through legislation. Pastoralists’ rights to use common pool resources such as water, grazing areas and transhumance corridors need to be legally secured, and adequate basic services need to be provided to mobile herders. In Spain, for example, the government re-established 120,000 km of traditional transhumance routes, and provided subsidies for establishing watering points and veterinary services along the routes (Niamir-Fuller 2016). Some governments are taking steps to protect rangelands and improve the livelihoods of mobile pastoralists. For example, in Senegal, vast tracts of the Ferlo savannah has been put into a Trust for pastoralists and traditional transhumance routes have been documented and recorded. China’s National Grasslands Act allows for communal control of pastureland by villages (Niamir-Fuller 2016).

These are only a few examples of the type of development approaches and public policies in which pastoralists are interested when working together with other family farmers to achieve the agenda of the Decade within the framework of the Sustainable Development Goals (SDGs) – specifically in the drier, more mountainous, colder and/or more remote rural areas of the world. In their policy advocacy during the Decade, emerging pastoralist CSOs can show how support to their way of living and production in these areas can contribute to attaining numerous SDGs, such as eradicating poverty (SDG 1), ensuring global food security and nutrition (SDG 2), contributing to good health and well-being (SDG 3), gender equality (SDG5), dealing with climate change (SDG 13), conserving biodiversity and sustainable land use (SDG 15)².

² See also “Pastoralism & the SDGs: how supporting pastoralism can help realise the Sustainable Development Goals” (<http://www.celep.info/pastoralism-and-the-sdgs>)

Not only under the theme of “Pastoralists” but also under many other themes being addressed during the Decade of Family Farming, pastoralist voices need to be heard, e.g. Agroecology, Indigenous Peoples, Mountain Farming and Rural Women. Pastoralists can join forces with small-scale crop farmers to oppose large-scale industrial and non-sustainable agriculture and to call for policy formulation and implementation that creates more enabling conditions for all family farmers.

We hope that the Decade for Family Farming will provide an opportunity for pastoralists to organise themselves better and to make their voices heard in platforms for policy dialogue, particularly the National Committees for Family Farming, in which pastoralist organisations should be represented and active. Here they could engage in national- and regional-level analysis of the impact of current policies on pastoralists, so that countries and groups of countries (in regions where pastoralists cross borders for livestock grazing or trade) can find ways to draw up policies that recognise and support pastoralists and to ensure that these policies are implemented. In the national and regional initiatives during the Decade, we would like to see pastoralists thus included among the family farmers who are influencing agricultural (including pastoral), environmental and social policies and identifying gaps and opportunities to promote more equal and balanced development.

In this connection, we draw attention here to two specific initiatives related to pastoralists, for which we seek support:

- 1) Call for assessment of pastoralism and rangelands: The United Nations Environment Programme (UNEP) report “A case of benign neglect” (Johnsen *et al* 2019) reveals a lack of accurate and verifiable information on pastoralists and rangelands worldwide. It therefore recommends a multistakeholder international process for assessing the state of and trends in pastoralism and rangelands. Such knowledge will be vital in helping countries to make better policy decisions and to develop innovative solutions for sustainable pastoralism and healthy rangelands. At the Fourth Session of the United Nations Environment Assembly (UNEA-4) in March 2019, UNEP was requested in Resolution L17 to assist countries that wish to make regional assessments of pastoralism and rangelands. We need to advocate for such assessments, ideally using a harmonised methodology to allow a global overview – and the methodology will require a rethinking on how the data are collected, in order to be able to understand the dynamics of pastoral systems and their environments (see Krätli *et al* 2015).
- 2) Call for an International Year of Rangelands and Pastoralists (IYRP): This is an initiative of numerous pastoralist organisations and other stakeholders worldwide who seek to increase understanding of the importance of pastoralists and rangelands for global food security and environmental services and to achieve favourable public policies in all countries in which pastoralists live. The ultimate aim is for pastoralists to be better able to make productive use of natural resources in the rangelands in order to provide nutritious animal-source foods that complement the plant-source foods provided by crop farmers. Thriving pastoral systems would also ensure local employment and income and would help countries adapt their agriculture to climatic and other changes.

In the Decade of Family Farming, pastoralists and supporting organisations and networks hope to collaborate with other family farmers in drawing attention to the important role not only of small-scale crop farming but also of pastoralism (alongside small-scale fishery, aquaculture and forest farming) in reducing hunger and poverty, providing food and nutrition security, managing natural resources, protecting the environment, improving livelihoods and achieving sustainable development – in the case of pastoralism, especially in the drier, higher, colder and more remote rural areas.

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