



SUSTAINABLE PASTORALISM: ESSENTIAL TO THE FIGHT AGAINST DESERTIFICATION

Pastoralism: a driver of social and economic development

Rangelands cover more than 50 per cent of the planet's land area, playing a key role in the development of arid and desert regions as well as high-altitude areas. More than 500 million pastoralists depend on this form of livestock farming for their livelihoods and help to sustain these unique landscapes. A wide variety of grass-fed livestock farming systems exist, depending on the region and country: transhumant pastoralism, nomadic pastoralism, or systems based on the management of communal grazing lands. They also include systems based on private land use, such as farm-based livestock rearing on natural grasslands and ranching. The mobility of herds and people takes various forms: nomadism, transhumance, and pastoral cycles combined with periods of feeding on harvested and/or cultivated fodder. Furthermore, in these vast areas subject to significant climatic variations and unsuitable for rain-fed crops, it ensures the effective use of agricultural residues and by-products.

This sustainable management of pastoral areas provides a wide range of essential ecosystem services on rangelands and croplands (see box below).

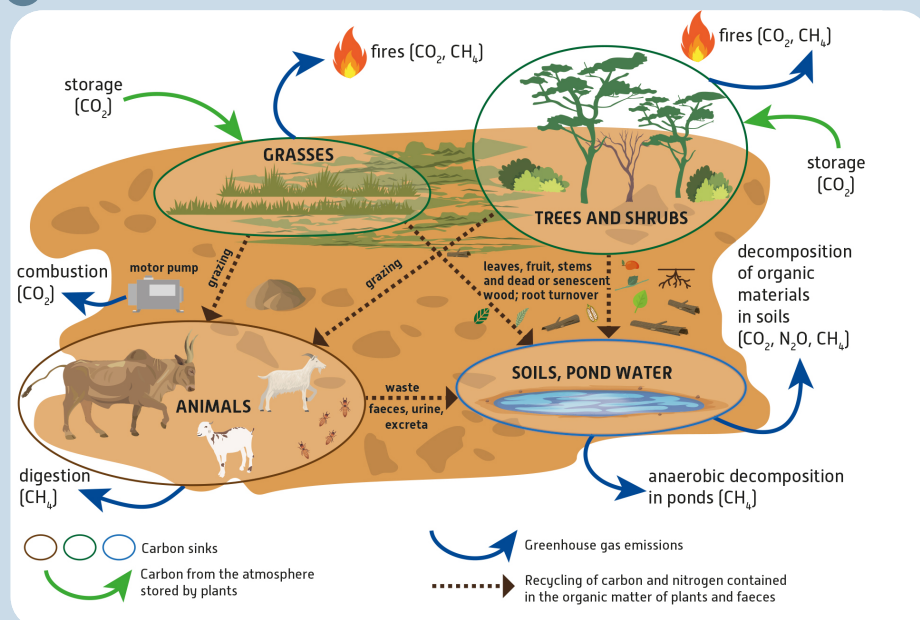


▲ A Mongolian herding family from the Gobi Desert, July 2025 © Bernard Bonnet - IRAM

Pastoralism: social capital and the know-how of pastoral societies

The know-how of pastoral societies and the pastoral world is acknowledged for the management of heterogeneous resources across time and space, the management of the commons and the organisation of mobility, in consultation with other stakeholders (crop farmers, etc.). Following France's example, around ten countries have had transhumance inscribed on the Representative List of the Intangible Cultural Heritage of Humanity. More broadly, the United Nations Convention to Combat Desertification (UNCCD)'s Rangelands Flagship Initiative is a global, multi-stakeholder initiative led by Mongolia and the UNCCD, aimed at increasing investment to achieve land degradation neutrality through the conservation, sustainable management and restoration of rangelands.

PASTORAL ECOSYSTEM SERVICES



- Soil enrichment in organic matter and nutrients
- Carbon neutrality (greenhouse gases, GHG, storage *versus* emissions) at the territory scale
- Nutrient recycling (N, P, K, etc.)
- Zoochory and seed dispersal
- Shaping landscapes, regulating vegetation and maintaining open landscapes
- Conservation of biodiversity

Source: Assouma M.H. 2016

Ecosystem-based approach to the greenhouse gas balance of a Sahelian silvopastoral territory: contribution of livestock farming. Paris, AgroParisTech, Thèse de doctorat.

Pastoralism: a powerful economic driver

Pastoralism is an economic driver across vast regions, with markets supplied by pastoral livestock farming, producing high-quality products that are partly recognised by geographical indications for their heritage value. According to the Food and Agriculture Organization of United Nations (FAO), pastoral livestock farming accounts for between 40 and 60 per cent of agricultural GDP in arid countries. In West Africa, transhumant pastoralism, which utilises Sahelian rangelands, supplies the bulk of the region's red meat consumption and offers great potential for dairy products. It also generates numerous services and jobs throughout the value chains.

But growing threats

Degradation of rangelands

Between 25 per cent and 50 per cent of the world's rangelands are degraded or under threat, due to:

- Successive droughts (e.g. in the Maghreb), wind erosion, and water erosion linked to the intensity of rainfall in the Sahel;
- The spread of invasive plants on rangelands in the Sahel and in most other arid and semi-arid rangelands for example *Prosopis juliflora*;
- Chemical pollution – less visible but nonetheless very real – and the growing pollution of the air, water and land caused by plastics;
- Inter-annual climate variability (temperature, rainfall) which creates uncertainty regarding the volume of forage resources, animal health and fertility.

These factors have negative consequences for livestock productivity, biodiversity, hydrological cycles and the livelihoods of rural communities.

Fragmentation of pastoral areas

The conversion of rangeland and the fragmentation of pastoral areas undermine access to grazing land and cause severe soil degradation. Indeed:

- **Cropping pressure on grazing land north and south of the Sahara**, leading to the privatisation of commons, deforestation and soil degradation, to increasing commodification of the access to resources (water, crop residues, etc.) and to landscape fragmentation, which can severely restrict mobility.
- **The weakening of inter-community arrangements** that ensure mobility, enabling the mobilisation of grazing resources at the lowest cost throughout the annual cycle and ensuring the productivity of this livestock sector.
- **The expansion of mining activities, infrastructure development and the roll-out of solar energy projects** also reduce grazing lands and hindering the movement of herds.
- **The development of protected areas, in most regions of Africa** as well as in Tibet, which excludes or restricts access by livestock — hinders the essential flexibility of grazing. In Europe, by contrast, protected areas (such as Regional Nature Parks or Natura 2000 sites) pose fewer problems for herders; indeed, pastoralism is even recognised there as a heritage asset to be preserved.
- **Increased predation pressure** (in several regions of the world) from protected wild carnivore species, reducing access to areas that are too exposed to attacks.



▲ A herd of transhumant herders passing through Bodadiougou, Burkina Faso © Gret

Insecurity and violence

Insecurity and violence against herders are on the rise across vast swathes of West Africa and the Sahel. **Pressure from armed groups, banditry and livestock theft** are triggering large-scale forced migration of herders in search of new, more suitable agro-pastoral areas.

▼ A herd on seasonal transhumance in the Écrins Massif, in the French Alps.
© Bernard Bonnet -IRAM



Inadequate public policies

- Public policies provide only very inadequate support for pastoralism, favouring so-called more intensive forms of agriculture that are often less productive in pastoral areas. Indeed:
- **Policies that prioritise industrialised crop and livestock farming undermine sustainable pastoral practices.** The underlying sedentary models and the efficiency and productivity ratios on which they are based fail to take into account the management of uncertainty and the capacity to adapt to unforeseen events that characterise pastoral systems. The hardiness of livestock is weakened by uncontrolled cross-breeding with imported improved breeds.
- **Funding remains predominantly directed towards the most intensive livestock systems** in the Global South (purchases of imported dairy cows, artificial insemination programmes, subsidies for 'modern' livestock farms, etc.).
- **The weak trade protection for products from pastoral livestock sectors leads to fierce competition from low-cost imported goods** (powder made from vegetable fats in direct competition with local milk in West Africa, imported frozen meat off-cuts, etc.).
- **A persistent lack of recognition of pastoralism as a viable and sustainable land-use practice** contributing to numerous ecosystem services has meant that grazing lands and their pastoralists are marginalised and neglected in the setting of national and global agendas.

- **Pastoralist families suffer from far too limited access to basic services:** education, healthcare and civil registration, particularly in pastoralist societies in West Africa and the Sahel.
- **The high labour demands of these pastoral systems strongly discourage new entrants and limit generational renewal,** meaning that pastoral livestock farming remains a sector that is generally unattractive to young people, particularly young women.

The combination of these threats has disastrous consequences for pastoral lands, the people who depend on them and for the entire planet.



▲ Consultation on Natural Resource Management in Banfora, Burkina Faso
© Gret

CHALLENGES for sustainable pastoralism

Sustainable rangeland management and pastoral practices offer **nature-based solutions** that make a vital contribution to addressing the three major international challenges of combating desertification, mitigating and adapting to climate change, and conserving and enhancing biodiversity. Meeting these challenges, however, requires coherent policies to:

- **Prevent** the ploughing up of rangelands and the rapid loss of soil fertility **by encouraging** the securing of collective rights to grazing rangelands, recognised as a common resource.
- **Prevent** the privatisation of pastoral lands for intensive, subsidised fodder monocultures **by encouraging** the introduction of more legumes into crop rotations, crop rotation systems and dual-purpose crops (e.g. cowpea), as well as agroecological practices.
- **Prevent** unrestricted access to water that is disconnected from the communal management of grazing lands and the privatisation of pastoral wells **by encouraging** local management and the regulation of access to water in conjunction with grazing lands.
- **Avoid** the exclusive management of protected areas (e.g. 30/30 commitments) that exclude transhumant herders, **by encouraging local and inclusive biodiversity management** within these areas.
- **Avoid** pasture restoration models based on tree planting and fencing off areas **by encouraging** the restoration of degraded grazing land by herders and their herds.
- **Avoid** confining transhumance to corridors without access to water, grazing land or resting areas **by encouraging** the collaborative planning of transhumance routes, including access to water, safe grazing land and suitable corridors.
- **Avoid** fire bans, the growth of scrub and increased risks **by encouraging** controlled burning and traditional fire management practices.
- **Avoid** large-scale tree planting on pastoral lands, instead **encouraging** assisted natural regeneration (seed dispersal, restorative zoochory).
- **Avoid** funding projects *through* carbon and biodiversity credits that disrupt local governance (territorialisation, individualisation of rights, possible exclusion of herders) **by promoting** the preservation of grazing lands, the protection of herders' rights and support for pastoral activities.

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Recommendations for public stakeholders

Revise land policies and policies on the sustainable management of resources and landscapes

- Recognise rights to local, regional and cross-border mobility;
- Halt the conversion of grazing land and strengthen complementarity, exchanges and services between farmers and herders (LDN, Land Degradation Neutrality);
- Improve the terms of compensation for crop farmers, agro-pastoralists and pastoralists in the event of the loss of their rights due to public utility projects relating to regional development, public infrastructure, mining projects, and industrial and agro-industrial projects;
- Incorporate the protection of pastoral commons into land certification and land tenure security programmes;
- Strengthen local governance and the defence of citizens' rights (equitable treatment in the event of disputes, participation in local governance, etc.); promote local charters or agreements between crop farmers and herders by encouraging negotiated rights;
- Innovate in techniques for the rehabilitation of degraded grazing lands, directly involving livestock farmers and pastoralists;
- Ensuring public safety in the event of fires: through the use of firebreaks and by involving livestock farmers and pastoralists in the redesign of burnt areas to make them less flammable, alongside foresters, firefighters, crop farmers, local authorities, etc.;
- Decentralising and empowering local stakeholders in the management of pastoral land;
- Implementing health policies tailored to local contexts (transhumance routes, watering points, interaction with wildlife, preservation of breeds with small populations), policies co-developed with local stakeholders, including livestock farmers and pastoralists, who possess specific knowledge; these should not be imposed from above and should be inspired by the biosecurity practices applied to sedentary livestock farming;
- Ensure a secure water supply for herds and the sharing of resources with other users in the context of climate change (an issue of growing concern in the Mediterranean and the Alpine pastures, and one that lies at the heart of policies in several Sahelian countries).

Strengthen alliances, social ties and the social capital of pastoralist societies with other stakeholders and users of pastoral lands

- Develop multi-stakeholder consultation tools to secure the land made available for livestock farming (grazing land, other resources) by promoting common-pool resource approaches and by helping to secure herd feeding systems and movement routes, whilst providing services for other stakeholders (organic fertilisation, weed control, utilisation of crop by-products, reduction of flammable scrub, etc.);
- Develop infrastructure and services that are accessible to pastoralists and suited to their mobile lifestyle;
- Make education, healthcare and civil registration services accessible to herders' families;

- Support the recognition of pastoral rights and professions; in France, for example, the debate centres on recognising the specific nature of salaried shepherding professions (cattle herders, herd keepers, etc.), taking into account sociological changes (people not from an agricultural background, women, etc.);
- Invest in technical and scientific training, including university courses, to equip decision-makers, development practitioners and, more broadly, the general public with a better understanding of pastoralism within society;
- Incorporate the multi-use and shared use of pastoral lands into the understanding of responsibilities and land uses.

Strengthen support for pastoral economies

- Assess more precisely the economic benefits and multiple knock-on effects of pastoral activity in territories;
- Establish the contribution to the sustainability of food systems and the security of *livelihoods* as a key focus of public policies supporting sustainable pastoralism;
- Support pastoral value chains, particularly for young herders and women herders, by highlighting the distinctive characteristics of pastoral products (such as geographical indications – for example, AOCs in France that have capitalised on pastoral systems);
- Improve the governance of livestock markets in favour of pastoralists, by making the markets more attractive and encouraging local authorities – which benefit from the tax revenue they generate – to invest in the planning and management of their pastoral areas;
- Revise trade policies to improve the environment for local supply chains (customs protection, tax regimes distinct from those applied to imported products, etc.);
- Incorporate investment needs in the livestock sector into national agricultural investment plans, territorial development plans and the funding plans of local and inter-local authorities.

Conclusion

Promoting sustainable pastoralism requires a paradigm shift, so that mobility is no longer seen as a relic of the past but rather as a nature-based, modern solution capable of addressing the shared challenges of combating land degradation, adapt to climate change and avoid the collapse of biodiversity. Those involved in pastoralism possess all the technical expertise, social capital and adaptive capacity needed to tackle the new challenges that lie ahead. Renewed political and financial support, through policies focused on securing pastoral lands, strengthening alliances between pastoralists and other land users, and bolstering pastoral economies, will be essential to help them achieve this, by placing pastoralists and their organisations at the heart of the governance of value chains and rural areas.

