The benefits of pastoralism for biodiversity and the climate



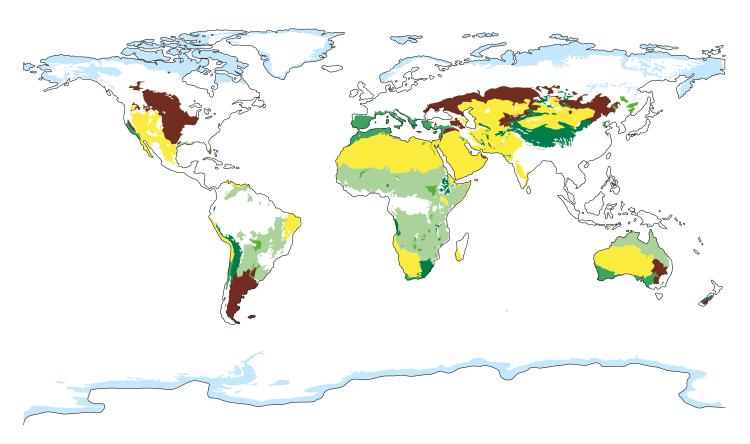


Livestock can be good for the environment. It depends on which livestock, where. Pastoralism – the system of often mobile, extensive livestock production on rangelands – can improve biodiversity, help sequester carbon and protect the environment. In the face of simplistic anti-livestock narratives, it is important to recognise the role of pastoral systems and pastoralists in addressing the linked crises of climate and biodiversity.

This set of six briefs argues for a positive vision for livestock and the environment. The briefs focus on pastoral systems in extensive rangelands, which cover over half the world's land surface.

Distribution of rangeland types (ILRI et al. 2021)

Source: Terrestrial ecoregions of the world



Deserts & xeric shrublands	27,984,644.64 km²	Temperate grasslands, savannas & shrublands	10,104,079.63 km²
Flooded grasslands & savannas	1,096,129.62 km²	Tropical & subtropical grasslands, savannas & shrublands	20,295,424.19 km²
Mediterranean forests, woodlands & scrub	3,227,266.28 km²	Tundra	11,598,465.28 km²
Montane grasslands & shrublands	5,203,411.00 km²	Total area in km²	79,509,420.64 km²

When advocating for the protection of 30 percent of the world's land for conservation by 2030 – as in the 30x30 campaigniii, which is very prominent in discussions for the 2022 biodiversity COPiv – it is essential to recognise that it is local land users such as pastoralists who are the best conservationists. They must be central to the solution, rather than being excluded, marginalised and removed from ancestral lands in the name of 'conservation'.

The debate about livestock, biodiversity and the climate requires nuance and differentiation, rooted in solid evidence. It is clear that livestock production can be bad for the environment: examples are the destruction of the

Amazon by beef ranching or the production of soya, which is transported across the world for carbon-intensive industrial production systems. But not all livestock systems are the same. Extensively grazed, especially mobile, pastoral systems do not automatically cause 'desertification', as is sometimes assumed, but can enhance biodiversity and offer a low-carbon alternative to industrialised systems'.

In sum, certain livestock production systems – notably pastoralism – can benefit the environment, and so pastoralists need to be central to the COP15 agreements on biodiversity.

WHAT IS PASTORALISM AND WHY IS IT IMPORTANT?

Pastoralism is a vitally important production system that involves millions of people. It is a low-impact system that makes use of highly variable rangeland environments where often no other production can take place. Pastoral production converts grasslands into high quality protein to

improve people's diets. In so doing, such extensive grazing systems generate livelihoods for poor and marginalised populations, and in turn can enhance the environment, including biodiversity.



POSITIVE ENVIRONMENTAL IMPACTS OF PASTORALISM



LOW CARBON IMPACT

Pastoral systems can show neutral or positive carbon balances, especially for mobile systems that distribute manure/urine and incorporate it, adding to carbon cycling. Yet standard approaches to assessing climate impacts from livestock miss this, as the data comes from industrial systems. This distorts the debate, which often fails to differentiate between different livestock systems^{vi}.



ENHANCING BIODIVERSITY THROUGH LIVESTOCK USEVII

Low intensity grazing with limited disturbance, as well as distributed high nutrient content patches across grazing lands, can enhance biodiversity. Over the landscape scale, transhumance can assist with seed dispersal and connecting biodiverse areas across regions. Removing livestock – as in exclusionary conservation or some rewilding approaches – can change grazing pressure and result in the invasion of particular species, reducing biodiversity, as well as undermining the conservation of rare species: for example, vultures (see Brief 3 in this series).



MANAGING OPEN ECOSYSTEMS

Livestock have long been important elements of 'open ecosystems'viii - including savannas, parklands, moorlands, tundra and steppes - where trees and grasslands exist in a complex, changing dynamic. Such ecosystems do not exist in a single stable state: there is no 'pristine', original nature to 'restore'. Nonequilibrium dynamics mean that land degradation due to overpopulated animals is unlikely, as droughts or other abiotic events reduce populationsix. However, such systems can be extremely vulnerable, unless managed well. For example, bush encroachment can destroy rangelands, while mass tree planting efforts are inappropriate in open ecosystems (see Brief 2). Such systems thrive on disturbance from grazing, but also fire. The build-up of dry matter can be catastrophic unless it is grazed (see Brief 4).





COLLABORATIVE CONSERVATION

Livestock and wildlife can co-exist, and always have done so, prior to the relatively recent insistence on protected areas and so-called 'fortress conservation'. After years when more collaborative conservation approaches have been emphasised, in some places we see a return to exclusionary conservation, which is often militarised and privatised. But these areas are not effectively protected without the participation of local people as landscape users. If livestock keepers are involved in collaborative conservation, pastoralists can act as protectors of nature, helping to enhance the value of wild landscapes (see Brief 6).



















WHAT DOES COP15 NEED TO DO?

The documents for discussion^x amongst the Biodiversity Convention Parties have all the right words, including participation, inclusion, traditional knowledge, involvement of indigenous peoples and local communities. But there are also concerns. In high-level documents there is inevitably a lack of differentiation and nuance. There is much focus on forests, but not rangelands, and there is no mention of pastoralism.

- Accept that certain types of livestock production system, including pastoralism, can be good for the environment, can enhance biodiversity and can offer a low-carbon production system that is beneficial for people and the planet.
- Explore ways of involving pastoralists and other livestock-keepers in environmental management and conservation, avoiding the exclusionary tendencies of 'protected areas' and of some approaches to 'rewilding'.
- Support pastoral transhumance and migratory routes as a way of improving biodiversity, connecting ecosystems and supporting species conservation.

Furthermore, there are calls for more 'protection', with ambitious national targets being set, without indicating how this will occur. Will this be through exclusion or through comanagement?

In these briefings, we recommend a more collaborative approach to conservation and livelihoods, centred around five demands:

- Avoid mass tree planting in open ecosystems such as rangelands as part of 'greening' initiatives, and instead explore approaches to restoration more compatible with such environments and their use by pastoralists.
- Through the restructuring of incentives, subsidies and policy frameworks, encourage the return of pastoralism and livestock grazing to areas where such flexible grazing practices have been abandoned. This will help support livelihoods, enhance biodiversity and reduce wildfires.



















- ILRI et al (2021) Rangelands Atlas. <u>bit.ly/3H8mOb7</u>
- ILRI et al (2021) Rangelands Atlas, p.9
- See <u>campaignfornature.org/why-30-l</u>; however, conserving 44% of the world's land surface for biodiversity would affect 1.8 billion people, mostly in the Global South see Allan et al (2022) The minimum land area requiring conservation attention to safeguard biodiversity, Science 376(6597) <u>bit.ly/3QcH6nS</u>
- iv cbd.int/meetings/COP-15
- Houzer, E. and Scoones, I. (2021) Are livestock always bad for the planet? PASTRES report <u>pastres.org/livestock-report</u>; K\u00f6hler-Rollefson, I. (2021) Livestock for a small planet. bit.ly/39fFhGg
- vi Houzer, E. and Scoones, I. (2021)
- vii Bond, W.J., (2019) 'Open ecosystems: ecology and evolution beyond the forest edge'. Oxford: OUP bit.ly/3Hf4oFM
- viii ibid.
- ^{ix} Behnke, R., Scoones, I. and Kerven, C. eds. (1993) 'Range ecology at disequilibrium: new models of natural variability and pastoral adaptation in African savannas'. London: ODI
- VIN Convention on Biological Diversity Secretariat (2021) First draft of the post-2020 global biodiversity framework. <u>bit.ly/39dP5R2</u>













Find out more

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