

## Sustainable Investments for Large-Scale Rangeland Restoration (STELARR) project

Rangelands occupy approximately 54% of all land on earth (ILRI et al 2021), they are home to 30% of all species, contain one third of all soil carbon, and support the livelihoods of at least half a billion livestock-keepers. About 91% of global rangelands are extensive rangelands with few landscape boundaries (e.g. fences) and have limited crop agriculture. The remaining 9% support a mix of grazing and cultivated land with boundaries and have low to moderate human populations. Although only 3% of the world's people live in extensive rangelands, 35% of the world's sheep, 23% of the goats and 16% of the cattle and water buffalo graze here. Around 63% of rangelands are in drylands (World Desertification Atlas, 2018).

Properly managed rangelands can provide food security and poverty alleviation to millions of people. Rangelands provide a wide range of ecosystem services such as food and fibre, carbon storage (including ~30% of the world's soil carbon), recreation, open space and water supply. With improved rangeland management, they could potentially sequester a further 1300–2000 Mt CO<sub>2</sub>e by 2030. Rangelands are essential resources both for maintaining environmental services like biodiversity conservation and as a source of livelihood, especially for rural communities.

However, 25–35% of rangelands globally are under some form of degradation. The conversion of rangelands to other uses has shrunk the area available for livestock, resulting in extra livestock pressures on remaining land. The impacts of inadequate government policies and of climate change leading to higher temperatures and more erratic rainfall (reduced in some places, increased in others) have exacerbated land degradation (bare soils, soil erosion and compaction), together with losses in animal productivity, wildlife and biodiversity. Land-use change has been identified as a key driver/ trigger for pandemics such as Covid-19, as wild animals get pushed closer to domestic livestock and humans, meaning there is greater opportunity for the development of new zoonoses and “spill-over.”

Large-scale financing for rangeland restoration is scarce. Most of the banks and funds that engage in local value-chain development are financing actions that have little to do with rangelands or their restoration. The lack of sufficiently tested and verified global standards, tools and frameworks for rangeland restoration hampers the upscaling of successful techniques in developing countries. The scalability problem is compounded by inadequate enabling environments, such as lack of conducive land-tenure policies and of incentives and financial resources for small and medium-sized enterprises operating in the rangelands.

The Sustainable Investments for Large-Scale Rangeland Restoration (STELARR) project is funded by the Global Environmental Facility (GEF), implemented by the International Union for Conservation of Nature (IUCN) and executed by the International Livestock Research Institute (ILRI), supported by other CGIAR centres (ICARDA, Alliance of Bioversity and CIAT, and CIFOR). It will work with livestock value-chain actors including the commercial sector to make the value chains more sustainable and climate-friendly by ensuring that investment is made in the resource base (the rangeland) to sustainably raise productivity of rangelands and restore them where needed. STELARR will also contribute to building international commitment and action for rangeland restoration through a combination of convening influential actors and alliances and strengthening evidence-based knowledge.

The overall objective of STELARR is “to reverse rangeland degradation and improve productivity of rangelands globally through sustainable livestock value chains, and thereby reduce poverty and secure livelihoods, with inclusive benefits to women and youth”. The project seeks to:

1. Increase rangeland restoration investment through livestock value-chains
2. Enhance global commitment to sustainable rangeland restoration
3. Develop a global monitoring framework for rangeland restoration.

This project will support governments and other rangeland stakeholder to make strong commitments to advance sustainable rangeland restoration in the context of the Global Biodiversity Framework, Land Degradation Neutrality, the UN Decade on Ecosystem Restoration and the IYRP 2026.

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