



Rangelands of Beni Kheddache, Tunisia

6 ENSURING SUSTAINABILITY OF RANGELANDS AND LIVELIHOODS OF PASTORALISTS INCLUSIVE LAND MANAGEMENT PRACTICES



Rangelands are often seen as grazing lands for animals only, but they play a far wider role. They provide vital ecosystem services, such as mitigating climate change and conserving biodiversity in drylands, with important consequences for livestock production, natural resources, and socioeconomic development. Managing them sustainably requires striking the right balance between their different functions, a complex challenge for communities that depend on rangelands for their livelihoods and local authorities and policy makers who regulate land use.

The case of Tunisia: on the road to science-based rangeland governance

About 34% of Tunisia's total landmass is rangeland. For centuries, sheep, goat and camel herders have relied on mobility and the common use of rangelands for their livelihoods as an effective way to cope with droughts and conserve precious resources. However, Tunisia's current regulatory framework overlooks the needs of rangeland communities.

Instead it responds to a sedentary agrarian land use based on rainfed agriculture. Rainfed farming is feasible on these lands, but it is not sustainable. The situation has led to uncontrolled use of the rangelands, causing encroachment of cultivation. The resulting land degradation is made worse by recurrent droughts as the climate changes.

Rangeland degradation is costing the country over **US\$32 million** annually. Adding the cost of degradation from transforming rangelands to cropped land affecting **31,500 ha**, at a cost of **US\$115/ha** over a 30-year period, the total value of the loss amounts to around **US\$100 million**.

(Source: Tunisian Ministry of Agriculture)

The decentralization in governance since 2011 has, however, opened the doors to new relationships – local communities are wielding greater influence over decision-making on land use issues, and the government has greater flexibility to amend the existing legislation. A team of rangeland scientists from ICARDA has leveraged this opportunity and is working closely with the Tunisian Ministry of Agriculture, researchers, development agencies, and local partners to design a new science-based pastoral code that can ensure the viability of rangelands while addressing the needs of the various pastoral user groups that rely on them.

An in-depth analysis of existing laws and their applicability showed that the current Code on Forests – also applicable to rangelands – defined legal principles that deal with land ownership, an aspect not relevant to the traditional practice of land use by local people. The code's top-down approach focuses on the central state as the main actor and has led to the dismantling of the traditional system of governance of common rangelands, which defined rangeland resting periods and regulated access for entitled user groups so that resources would be conserved. In addition to overgrazing, land users are planting olive trees in areas not suitable for orchards as a way of appropriating land.

The new pastoral regulatory and governance framework proposed by the scientific team, led by Mounir Louhaichi, ICARDA's lead rangeland scientist, places the governance of the land in the hands of pastoral users. It lays down principles that are key to the viability of the pastoralists and the rangelands, such as:

- The rules and laws should be well adapted to the local conditions and surveyed and monitored by the local pastoral communities;
- The responsibility for pasture management should rest at the local level through an inclusive decision-making process involving all pastoral user groups;
- Conflict-resolving mechanisms should operate at the local level with the involvement of governmental stakeholders; and
- The new local governance of the pastoral resources must be accepted at the local, regional and national levels.

The outlook for the proposed pastoral code in Tunisia is promising, as the project's inclusive approach is securing support from Tunisia's policy makers and local communities alike. In June 2015, ICARDA organized a high-level meeting with the Tunisian Ministry of Agriculture (**General Directorate of Forestry**) and advised on and facilitated the creation of a shared vision with the relevant Tunisian ministries, research institutes, and the **International Fund for Agricultural Development** (IFAD) for reforming current pastoral law. At a follow-up national seminar, held in December 2015, ICARDA led a problem analysis and formulation of new institutional options with various stakeholders (ministries, research institutions, extension agencies, and FAO) for a new and more appropriate pastoral law. A working group with representation from the relevant ministries is being established to promote closer coordination and ensure outcomes that safeguard both the livelihoods of pastoralists and the future of rangelands.

The case of Uzbekistan: inequitable grazing land access causing land degradation

Changes in land use and land tenure practices after the Soviet era are causing a dramatic decline in the natural resources of the rangelands in Central Asia. At 260 million ha, it is the largest contiguous block of grazing lands in the world. As a first step towards more suitable policies in Central Asia, ICARDA scientists, in collaboration with local research partners, conducted a rangeland tenure study in August 2015 in the Aral Sea region of Karakalpakstan to analyze the issues faced by pastoral communities. The study revealed that the current framework is concentrating land use around rural community areas while remote rangelands are underutilized.

The problem is caused by a mix of factors. Officially, the smallholder livestock owners (with up to 20 animals) are only allowed to graze their animals freely

around villages, while the vast rangelands are reserved for state-owned sheep cooperatives, known as ‘*shirkats*’, with as many as 10,000 animals. Large livestock owners (with 600 sheep or more) can also access pastures under *shirkats* through contractual arrangements with the state and the *shirkat* itself. However, lands under *shirkats* are underused mainly because their water wells are in disrepair as the *shirkats* lack funds and maintenance costs are high.

Access to the more productive pastoral lands of the *shirkats* is beyond the reach of smallholders as the state imposes a land tax to lease them. As a way out, smallholders either lend their animals to the *shirkat* herders or work as *shirkat* herders themselves, which also allows them to graze their own animals. They also often enter into unofficial arrangements with *shirkats* in return for well-maintenance services – a risky proposition as *shirkats* are known to renege on the arrangement once wells are repaired, causing losses to livestock owners. In one example, as much as US\$11,500 was lost on well repairs.

Land degradation – largely in grasslands – is estimated to result in a 3% reduction in national gross domestic product (GDP) in Uzbekistan, estimated at US\$62.6 billion according to the World Bank. A solution could be an inclusive and locally adapted rangeland tenure system that enables balanced access to larger pasture areas by smallholders and large agro-pastoralists. Developing such a responsive tenure system requires bringing all stakeholders together for collective decision-making – rural communities, local administration, cooperatives, and policy makers – a continued goal for ICARDA in the region.

“ Rangeland tenure and governance are the biggest challenges we are facing in development-oriented research on rangelands. It is our role as scientists to offer evidence-based policy advice for these processes. ”

Jutta Werner, Scientist  **Rangeland Management and Rangeland Ecosystem Services, ICARDA**

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