

CASE STUDY 10

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KYRGYZSTAN

Organization: Rural Development Fund (RDF)
Region: Asia

The Suusamyr Valley in central Kyrgyzstan encompasses high-altitude mountain grasslands that have long supported pastoral communities. These communities, including women and youth, have been pivotal in conserving pastures and restoring degraded lands through traditional ecological knowledge (TEK) and community-based governance. Their practices are grounded in the spiritual world-view of Tengirchilik, which regards nature as sacred, guiding both daily activities and long-term custodianship of ecosystems.

Historical disruptions, particularly during the Soviet era, stripped communities of traditional land rights and governance structures. Post-1991 reforms introduced new mechanisms such as *Jaiyt Committees* (community-led pasture users' unions), yet the valley continues to face complex pressures. Internal challenges include overuse of certain pastures due to increased livestock numbers and fuel-wood driven deforestation for cooking and heating. External pressures, climate change, national development projects, and mining operations, exacerbate water scarcity, alter seasonal grazing patterns, and accelerate degradation. Areas such as Kyzyl-Jar and Tash-Dobo have experienced soil erosion, reduced water access, and biodiversity loss, with over 70% of Kyrgyz pasturelands reported as degraded.

Communities maintain resilient management systems that integrate TEK with modern approaches. Rotational grazing, seasonal livestock migration (*jailoo* for summer pastures, *kyoçh* for seasonal movement), and community-managed pasture committees ensure sustainable use. Elders and Aksakal councils guide decision-making on pasture rotation, water management, and restoration, while sacred sites (*mazars*) serve as conservation zones where grazing and resource extraction are restricted. Youth contribute innovations such as mobile apps for tracking grazing, waste management, and integration with GIS mapping and satellite monitoring, enhancing early detection of pasture degradation and adaptive management. The Electronic Pasture Committee (EPC) system is being implemented to further strengthen governance and monitoring.

Governance is gradually becoming more inclusive. Women participate actively in Jaiyt Committees, contributing knowledge of plants, medicinal herbs, and water systems, while RDF provides capacity-building and culturally appropriate tools to integrate TEK with technology. Community-led monitoring relies on observational indicators, including plant cover, livestock health, medicinal herb presence, and water flow, reflecting an adaptive, participatory approach.

Environmental outcomes demonstrate the effectiveness of these combined practices. Data show that the Suusamyr Valley remains predominantly grassland with stable tree cover; of 4,400 hectares of tree cover, only 4 hectares (<0.1%) were lost between 2001 and 2024[40]. Rotational grazing, pasture restoration, and community custodianship contribute to carbon sequestration, soil health, and biodiversity protection, highlighting the resilience and sustainability of Kyrgyz pastoral systems.

40 Hansen, M. C., P. V. Potapov, R. Moore, M. Hancher, S. A. Turubanova, A. Tyukavina, D. Thau, S. V. Stehman, S. J. Goetz, T. R. Loveland, A. Kommareddy, A. Egorov, L. Chini, C. O. Justice, and J. R. G. Townshend. 2013. "High-Resolution Global Maps of 21st-Century Forest Cover Change." Science 342 (15 November): 850–53. doi: 10.1126/science.1244693.