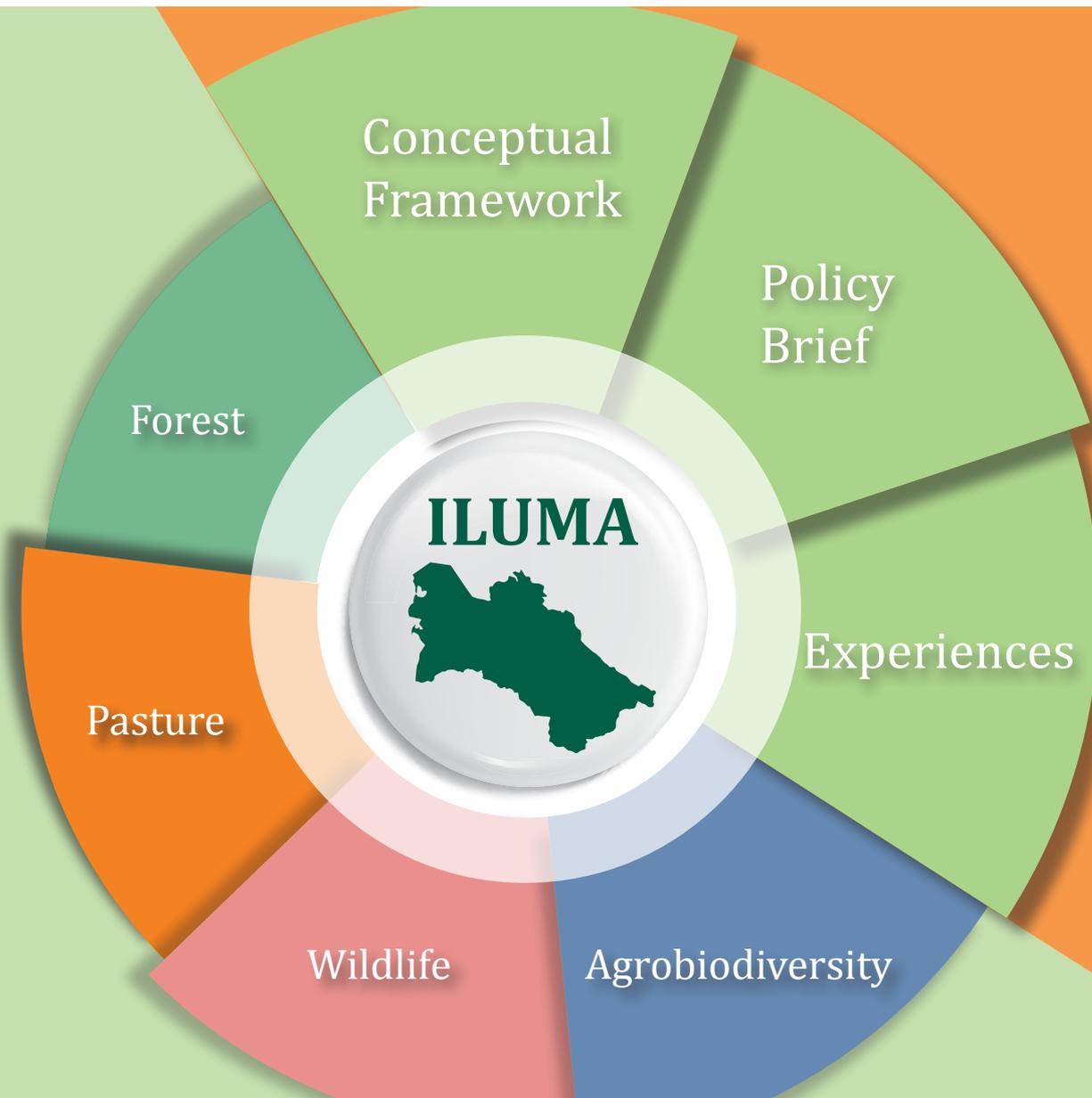


# Pasture Management in Turkmenistan for Integrative Land Use Management Approaches (ILUMA)



# Pasture Management

Adapting livestock raising systems to changing  
framework conditions

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## 1. What is this land use practice about?

Around 68% of Turkmenistan's surface area is used as natural pastures, most of which are situated in the Karakum Desert, characterized by very high temperatures (up to 50°C) in summertime and very low precipitation levels (70 – 150 mm/year). Precipitation occurs mainly in winter and early spring, more than half of it between December and April. Pastureland is sparsely populated by humans as well as livestock. Domestic animals which are kept include sheep, goats, cattle, camels and horses.

Very high stocking rates on pastures lead to overgrazing, reducing vegetative cover and resulting in topsoil erosion. This is aggravated by deforestation, mechanized destruction during engineering and construction works and climate change. The 2002 National Environmental Action Plan suggested that 77% Turkmenistan's land area is subject to some form of degradation of vegetation cover – although most of this is classified as slight and the data used are out of date.

According to national statistics, the increase in the proportion of privately-owned livestock has been associated with a rise in total livestock numbers of around 350 percent for sheep and goats and 300 percent for cattle since 1999. During the Soviet period, the carrying capacity of Turkmenistan's pastures was considered to be between 5 and 7 million sheep units; today, numbers of small stock alone far exceed this number whilst many additional livestock units are held as cattle and camels. It is this increase in stocking rates which has led to pressure to regulate pasture access through formal tenure arrangements.

## 2. Cornerstones of pasture management

Pasture management regimes must respond to the needs of different types of livestock user - including both smallholders and large commercial

producers. They must also put in place mechanisms for sustainable resource management. The process of enhancing pasture management in Turkmenistan is ongoing. The major cornerstone with which GIZ has been involved since 2014 is on pasture governance through development of a legal framework and planning for testing of its provisions in the field.

The National Strategy of Turkmenistan on Climate Change, published in 2012, lists the development of a Law on Pastures amongst its highest priorities. This opened a door to a technical cooperation agreement with GIZ, which financed a consultative process and drafting of the Law on Pastures. The Law had to find compromises between tenure security for individual users and the need for flexible movement in a highly variable desert environment. It also had to accommodate the fact that pasture is allocated on a long-term basis to quasi-state farming entities which can exercise considerable power over land access. The Law gave individual users leasing rights but introduced also a collective management element in the form of a local Commission for Pasture Use Regulation (CPUR).

The process of situation assessment and Law development was conducted by two international consultants, a national consultant - lawyer, and a team of Turkmen researchers. The process included both field research and a consultative process with government departments. A Working Group (WG) including representatives from government departments was set up to facilitate these discussions. The draft Law was submitted to parliament, where it was amended by a parliamentary committee and adopted in August 2015. The impact of the Law will depend largely on bylaws, which will define the status of pasture user and pasture commissions, and details of pasture allocation procedures. Since 2016, GIZ has supported the development of these bylaws and proposed to the Turkmen government to pilot and test them in practice, in particular pasture management planning.

The icons used in the table detailing GIZ interventions and activities under the legal development cornerstone refer to ILUMA dimensions as described in the following table:

Symbol	ILUMA dimension	Symbol	ILUMA dimension
	<b>Competence Development:</b> strengthening core competencies of key stakeholders for better performance.		<b>Knowledge Management:</b> improve knowledge management and foster ongoing learning so as to better adapt to change.
	<b>Planning and Monitoring:</b> adequate planning, management, and monitoring instruments, structures and processes.		<b>Organisational Development:</b> strengthen and develop effective organisations and performance-based organisational mechanisms.
	<b>Socio-cultural Relations:</b> deploy social relations and culture as strong foundations for integrative land use management.		<b>Institutions and Institutionalisation:</b> build strong institutions and institutionalise core processes.
	<b>Economy and Financing:</b> emphasize economic viability and foster economic development by sustainable investments.		<b>Environmental Conditions:</b> consciously know and integrate environmental conditions and functions in land use management.

## Cornerstone 1: Pasture Governance

### GIZ experience for Implementation

#### Strengthening the legal framework

- In Soviet times, pasture resources were managed by the state. In the 1990s, the former state and collective farms were transformed into associations of leaseholders known as farmers' associations. Some of these associations still own substantial numbers of state livestock which are managed by members on a leasehold basis. Leaseholders receive a proportion of live young in return for managing the animals and are also able to raise their own animals in parallel. In addition, 67 farming enterprises covering around 30% of pastures are managed by the state, initially through the State Association for Livestock Breeding and later directly by the Ministry of Agriculture.
- Using pastures allocated to these institutions are large numbers of private livestock owners who may be workers or leaseholders of state farms, other livestock owning-residents or migratory users from elsewhere. According to national statistics, around 90% of all livestock are privately owned. Yet farmers' associations and livestock farms together hold over 75% of the country's 38 million hectares of pasture lands. There is thus a two-tier system, with farmers' associations and livestock farms holding primary rights to pastures, and a multitude of individuals using the pasture privately, or as leaseholders or workers under the umbrella of the two forms of state farming enterprise.
- There was a need to formalise access to pasturelands by private owners and to put in place management systems which allow management beyond the state farm structures, which are slowly being dismantled.
- GIZ was asked by the government to design a draft Law on Pastures to this effect. This included the following stages: (I) stakeholder analysis of current pasture use patterns and management institutions; (II) analysis of the legal situation; (III) establishment of a Working Group (WG) on pasture reform; (IV) drafting of the Law and submission to the Parliament; (V) international experience exchange for WG members and other stakeholders; (VI) drafting of bylaws and (VII) field research for testing of provisions of the Law and bylaws.
- The research and analysis stages found that in some regions where private stock dominate, organised user groups have emerged and manage highly mobile grazing systems on state pastures. In other areas individual actors negotiate between themselves for pasture use. Such flexible grazing access is crucial for sustainable pasture management and resilience in a highly variable and drought prone environment. The challenge is to find legal mechanisms to maintain flexibility and provide access to both private and state users, through pasture allocation processes applicable to both user groups.
- The Law recognises allocation of pastures to state farming entities (as primary pasture 'users') but also makes provisions that *gengesh* (local administrative units corresponding to a sub-district) and eventually Pasture User Associations may also theoretically become primary pasture 'users', when state farms are dismantled – as is planned by government. Individual users (renters) then access short term pasture leasehold rights through a local commission (CPUR) including both resident livestock owners and the primary pasture user, with the aim of avoiding centralised first-come first-served allocation of pastures to wealthy non-residents.

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See also list of draft bylaws below.

Key Elements of the experience	Guiding principles and the way how they are related to ILUMA dimensions	
<p><b>The Law on Pastures</b></p> <p>The Law on Pastures was designed together with stakeholders and lawyers</p>		<ul style="list-style-type: none"> <li>• Organise and facilitate round-table discussion to present results of fieldwork and situation analysis to a range of stakeholders including WG members (see below) and field observers from some of the communities covered by the fieldwork.</li> <li>• Invite an international lawyer in environmental resource management to support legislative development.</li> </ul>
		<ul style="list-style-type: none"> <li>• Present international experience in pasture management at round table discussions with Turkmen stakeholders, for contrast with the Turkmen situation.</li> <li>• Present results of field assessment at the Resilience, Research and Innovation Conference in Djibouti, 26-28 October 2015 and support publication of paper together with field team members.</li> <li>• Produce a booklet on the 2015 Law on Pastures covering the main provisions in a simplified manner.</li> </ul>



- Analyse current legislative framework to understand the legal status of pastures and of their different categories of user.
- Conduct surveys and consultations of local population and other stakeholders, to understand real patterns of pasture use and management, both formal and informal. Participatory research techniques were applied by Turkmen scientists and consultants with private and state lease holding shepherds on five former state farms covering different ecological zones of the country.



- Set up working group (WG) on pasture reform including representatives from:
  - Ministry of Agriculture and Water Economy: Livestock and Water Resources departments;
  - State Committee for Environmental Protection, Land Resources Department and Forestry Administration, and Institute of Deserts, Flora and Fauna;
  - Parliamentary Committee on Environment, Natural Resources and Agro-industrial Complex;
  - Institute of Veterinary Science and Animal Husbandry.
- Facilitate meetings and workshops with the WG and for representatives of localities selected for pilots at each stage of law design process (review of international laws, discussion of potential systems, prioritisation of pilot sites).
- Deliver inputs to the WG including draft laws, invited experts from abroad and study tours to other countries.



- Existing socio-cultural relations were worked into the design of the Law in the following ways:
  - Many claims to wells and pasture are based on long term use by a particular shepherd or livestock owner, often over several generations – the decentralisation of pasture management to current users promotes application of local knowledge to pasture allocation mechanisms.
  - Incumbent users often allow others to use ‘their’ wells in times of drought – these safety mechanisms are important to survival of livestock in arid conditions. For this reason, the Law specifies that pasture allocation is short term and reviewed each year.
  - Herders may move far from resident areas, negotiating with shepherds elsewhere or moving into empty territory, spreading grazing pressure more evenly. The law must not impose heavy transaction costs to these movements. Provision in the Law is made for CPUR to provide pasture to incoming herders should stocking rates and water availability allow.
  - An existing traditional institution is that of *chekene* – by which groups of households pool animals for collective grazing. New legal mechanisms must conserve the right of such user groups to access pasture. *Chekene* is explicitly recognised as a pasture-using institution in the 2015 Law.

		<ul style="list-style-type: none"> <li>• Produce a draft law on pastures including provisions for pasture use and management as the following: <ul style="list-style-type: none"> <li>- State livestock farms and farmers' associations are primary pasture <i>users</i>, holding pastures for long term use reflecting reality. But <i>gengesh</i> (local administrative units) and Pasture Users Associations can also take on this function once state farms are dismantled. Individuals grazing animals on pastures (private owners, <i>chekene</i> groups, leaseholders of state animals) are known as renters.</li> <li>- A Commission for Pasture Use Regulation (CPUR) is established to cover the territory of the primary user and formed of representatives of the primary user, individual and groups of pasture users, village elders, and specialists from local units of government departments on land, water and forest resources.</li> <li>- Pasture is to be allocated to '<i>renters</i>' based on an assessment of pasture and water resources and claims to pasture by existing users, with residents having first priority through a pasture use planning process</li> </ul> </li> </ul>
		<ul style="list-style-type: none"> <li>• <i>Land Degradation</i>: Animal numbers are rising fast, so mechanisms for provision of access allowing for some form of control over stocking rates and movements are integrated into the Law through the pasture planning and allocation process. The CPUR would for instance have powers to allow or reject incoming migrant herders to their territory depending on conditions and to use allocation procedures to favour livestock mobility.</li> <li>• <i>Climate Change and Variability</i>: Turkmen pastures are characterised by aridity, variability and uncertainty. Legal systems must provide both tenure security and flexibility of access to different pasture and water sources within and between years. Mechanisms were designed to facilitate adaptation to climate change in the future so that pasture allocation mechanisms foreseen in the Law are flexible and incur low transaction costs. For this reason, it was essential to avoid centralised pasture application procedures to the district or region.</li> </ul>
<p><b>Pasture bylaws</b></p> <p>Bylaws for detailed implementation of the Law on Pastures were drafted and sites selected for piloting.</p>		<ul style="list-style-type: none"> <li>• Organise experience exchange so that WG members can learn about pasture management mechanisms in other countries, including various forms of common property resource management and insights into the social and environmental consequences of privatisation and fencing schemes. <ul style="list-style-type: none"> <li>- Study tour to France allows government representatives to get to know a common property resource management system in practise – including how user groups, local government, land management authorities, the chamber of agriculture and veterinary structures interact to ensure sustainable pasture management.</li> <li>- Small conference held in Ashgabat informed stakeholder from Turkmenistan about pasture management mechanisms in Mongolia, Switzerland, China and Kyrgyzstan.</li> </ul> </li> </ul>



Exposure to different models of pasture management helps participants to envisage potential regulatory mechanisms for Turkmenistan. Invitees included those on the Working Group, representatives of local government and pasture users from potential pilot areas.

- Study tour to Kyrgyzstan for project field facilitators to get to know pasture management mechanisms in practice.



- Hold planning meetings with the Working Group to work on prioritisation of pilot sites, amendments to the Law on Pastures and Law on Land and formulate steps for piloting pasture bylaws.

*Pilot sites were chosen based on the following criteria:*

- *Ecological:* representative of major ecological zones: sand desert, mountains, clay desert, pastures close to irrigated areas.
- *Institutional:* where farmers' association and local authority boundaries coincide so that both institutions can be involved.
- *Socio-economic:* livestock raising should be a major economic activity at sites, but both solely pastoral and mixed sites should be selected. Likewise, sites where all livestock are private and sites with both private and state animals should be included.
- *Integrated approaches to Natural Resource Management:* sites include forests and protected areas opening the possibility to link forest and wildlife protection with grazing management.
- Undertake field visits with key WG members in order to select and prioritise sites for piloting bylaws. Visits include participatory workshops with pasture users to assess the situation and identify primary and secondary pasture users and existing institutions for pasture management; visits to farmers' association managers, local and district authorities to obtain maps and cadastral information.



- Elaborate bylaws necessary to implement the Law on Pastures in practice. A draft legal package was submitted in the autumn of 2018 and included the following bylaws:

- Charter for the Commission on Pasture Use Regulation;
- Procedure for provision of pastures for use (originally use and rent);
- Methodology for pasture use planning;
- Pasture ticket template (originally rental contract).
- In addition, the original 2015 Law on Pastures was revised due to a number of structural changes in the agricultural sector including the planned privatisation of all state livestock farms and some farmers' associations, leaving only *gengesh* and putative PUAs as potential users. Terminology of user and renter is changed to primary and secondary user. Two documents were submitted to this effect:
  - New edition of Law on Pastures;
  - Justification for proposed changes

		<ul style="list-style-type: none"> <li>• Pasture lease is subject to tariffs to be paid by head of livestock, with rates fixed according to species and pasture type or quality. Ideally, funds should be held locally in the <i>gengesh</i> budget, for investment in pasture infrastructure, with projects to be prioritised during pasture use planning. In the 2015 Law on Pastures it is stated that funds raised from pasture lease would go to the central budget, discussions were conducted on the possibility to alter this clause and it was changed in the amended version submitted with the package.</li> </ul>
<p><b>Development and testing of pasture management mechanisms</b></p> <p>Once pilot sites had been selected, next steps were planned for the piloting process.</p> <p>(This key element is still at planning stage and has not been implemented yet.)</p>		<ul style="list-style-type: none"> <li>• Assist District land resources departments to support CPURs in their jurisdiction to be able to collate and manage the information they need for pasture use planning. To this effect, district experts will be trained in the use of Geographic Information Systems, beginning in pilot districts.</li> <li>• Develop the competence of the CPUR to develop pasture management plans. A draft bylaw '<i>Methodology for Pasture Use Planning</i>' has been developed (see above). However, a full protocol and manual for the process will have to be developed in consultation with local actors once CPUR have been set up in pilot areas (see detail below).</li> <li>• Support Turkmen specialists to work with CPUR to conduct field data collection for the pasture knowledge management system (see below). Whilst some of the information, such as boundaries, exists at the national level, other data such as user locations and identities must be obtained using a field mapping procedure involving pasture users on the Commission together with <i>gengesh</i> and district staff.</li> </ul>
		<ul style="list-style-type: none"> <li>• Support pasture use planning through development of knowledge management systems including collection and collation of data and development of GIS system for storage and use. Pasture management plans need spatial information such as: <ul style="list-style-type: none"> <li>- Boundaries of the <i>gengesh</i> and of pasture areas used by <i>gengesh</i> inhabitants in other areas;</li> <li>- Boundaries of pasture and other ecological and administrative zones such as forests;</li> <li>- Inventory of existing users; their provenance (resident or external);</li> <li>- Location and quality of water points (salinity, volume of water, reliability);</li> <li>- Pasture/vegetation types;</li> <li>- Stock migration tracks.</li> </ul> </li> <li>• The spatial database will facilitate assessment of claims and updates to the plan as livestock numbers, vegetation or water availability change over time. Under drought conditions, the Commission can allow fewer migrants into their territory, or require members to reduce stock numbers</li> </ul>



- Support pasture use planning through piloting of the bylaw – *Methodology for Pasture Use Planning* which should include:
  - Maps (as listed above);
  - Herd and flock seasonal locations and movements;
  - Allocation of pastures to individuals and groups;
  - Consider the carrying capacity of pasture and water resources;
  - Pasture improvement activities, if envisaged;
  - Planned infrastructure development.
- Support development of a more detailed protocol and manual for the planning process. Support the Commission to set up criteria for assessment of claims to wells.
- Ensure that residents have first priority; avoid annexation of pastures habitually used by local people by absentee or city-based livestock owners.



- Support testing of the bylaw *Charter for the CPUR* through piloting establishment of pilot CPURs including:
  - Membership;
  - Functions;
  - Decision making procedures;
  - Finance.
- Support further establishment of the Commission through development of a step-by-step protocol for member selection and design of internal regulations (based on the bylaw). Significant field consultation will be necessary, as the very first step in the piloting of the Law.

# Future outlook

Turkmen stakeholders, with support of GIZ, studied different international pasture management practices during the above-mentioned small conferences and study tour. All these examples demonstrate that a long-term leasing system may lead to the exclusion of smaller herders from pasture management and that the inter-annual flexibility, which is so important in a variable and changing climate, will be reduced significantly.

Thus, GIZ strongly recommends piloting the bylaws of the Law on Pastures which have been developed so far and adapt them based on the lessons-learned together with all key stakeholders.

The systems put in place in the 2015 Law on Pastures and associated bylaws were based on the following principles:

- *decentralize pasture management as much as possible;*
- *keep transaction costs for pasture access low;*
- *enable flexibility;*
- *avoid annexation of pasture by wealthy non-resident herders to the detriment of current users;*
- *allow group access by collective herders.*

These elements attempt to ensure that the Law is based on actual pasture use mechanisms on the ground and also take into account the climatic conditions under which livestock production is conducted.

Pasture management in Turkmenistan is a socially, culturally and economically sensitive issue and a large part of the rural population's livelihood depend on pastures and livestock.

The goal is to develop and implement a pasture management framework which is socially fair, adapted to local culture, economically viable and ecologically sustainable in the long term.

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