

Pasture Management in Pump Khana, Jawzjan

June, 2025 | Pump Khana Manteqa, Jawzjan Province, Afghanistan

KEY MESSAGES

- Livestock agriculture seems to heavily rely on public rangelands and supplemental feed, with most households prioritizing home consumption and selecting pastures mainly based on water access and plant health.
- Seasonal pasture use reportedly peaks in spring, which is when degradation trends can be most clearly observed through remote sensing, underscoring the need for more consistent rotation and sustainable grazing practices.
- Despite a reported decline in livestock numbers and remote sensing showing local improvements in pasture conditions, current livestock sizes still seem to exceed the carrying capacity of the manteqa's pastures, which may place limits on recovery.
- Community coordination and local governance seem to act as strong enablers for pasture management, but challenges like excessive livestock, financial constraints, a lack of technical knowledge may hinder uptake and implementation of more technical restoration measures.

ASSESSMENT OVERVIEW

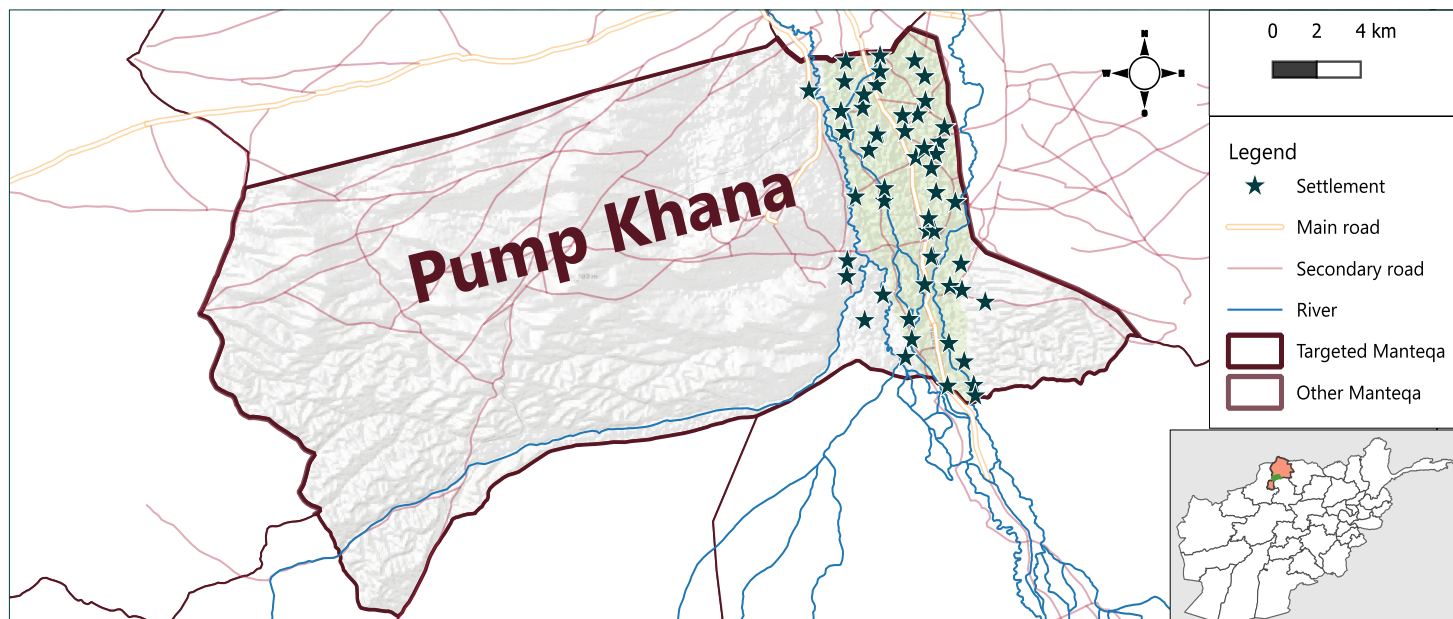
This assessment aims to analyze seasonal and year-round patterns of pasture and dryland use, evaluate degradation drivers, including climatic and socio-economic pressures, and examine local governance structures and community capacities to inform sustainable rangeland interventions across five manteqas² in Northwest Afghanistan. The selected manteqas have been targeted to implement a pilot of Acted's THRIVE initiative to support rangeland restoration in cooperation with local communities.

Methodology: This Pasture Management Research Assessment relies on a mixed-methods approach combining a HH survey, KIIs and Remote Sensing indicators to assess the use, management and state of pastures in five manteqas in North West Afghanistan. Data collection was carried out between the 26th of May and the 13th of June 2025. Findings in this factsheet should be considered indicative. For more details, follow this [link](#).

CONTEXT & RATIONALE

The convergence of prolonged environmental stress, socio-economic hardship, and limited institutional capacity has placed rural communities in Northwest Afghanistan under increasing pressure. In areas where livelihoods are heavily dependent on agriculture and livestock, recurring droughts, land degradation, and competing land use have intensified vulnerabilities.¹ To support sustainable recovery and resilience-building, the Pasture Management Assessment aims to generate localized, evidence-based insights into the use, degradation, and governance of pasture and rangeland resources. Conducted as part of the Sustainable Rural Development Programme (SRDP) V, this assessment aims to inform programming and prioritization for sustainable land management by tracking seasonal patterns, and community practices across five manteqas. The inclusion of remote sensing further enhances the ability to monitor environmental change over time and triangulate findings with pasture management's Household (HH) survey and Key Informant Interviews (KIIs).

Map 1: Pump Khana Manteqa



PASTURE AND RANGELAND USE PATTERNS

Introduction

Pump Khana is located in Jawzjan Province, comprising 56 villages with an estimated 16,530 households (111,698 individuals).³ Less than 2% of the population are returnees and around 3% are internally displaced persons (IDPs).⁴ According to a previous assessment, most of Pump Khana’s residents rely on agriculture for their livelihoods, and around 30% of its area are considered pastures.⁵

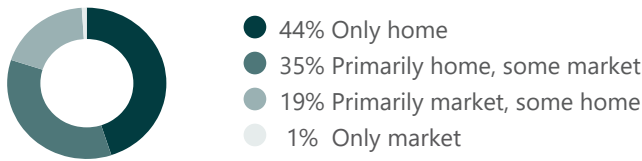
Household surveys and key informant interviews provided insight into seasonal grazing patterns, decision-making processes, and management practices that shape rangeland use across its communities.

Household-level Pasture Use

Home Consumption and Commercial Farming

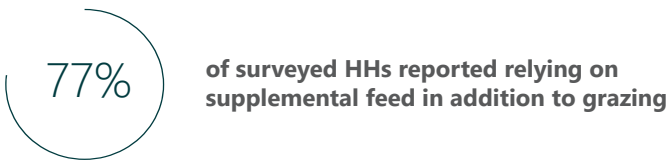
Nearly half of the households reported engaging in livestock agriculture only for home consumption. While many also seem to sell livestock products on markets, only a small proportion reported production for market sale as the primary reason, highlighting the importance of livestock agriculture for self sufficiency.

% of surveyed HHs that reported whether they farm for home consumption or market sale



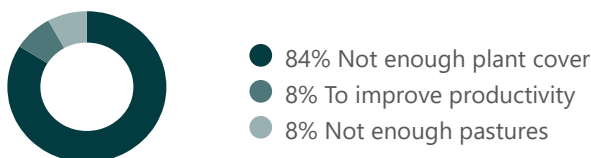
Grazing and Supplemental Feed

Aside from pastures, supplemental livestock feed seems to play a central role in the manteqa’s livestock sector. Livestock farmers in the manteqa overwhelmingly reported relying on both grazing and feed, with only 23% pointing to grazing as the only feed source for their animals.



Most surveyed households seem to rely on supplemental feed due to environmental limitations. The majority (84%) cited insufficient plant cover as the main reason, while 8% use it to boost productivity. Another 8% reported a lack of pastureland, suggesting that feed supplementation is largely driven by necessity rather than choice.

% of surveyed HHs that reported reasons for using supplemental feed

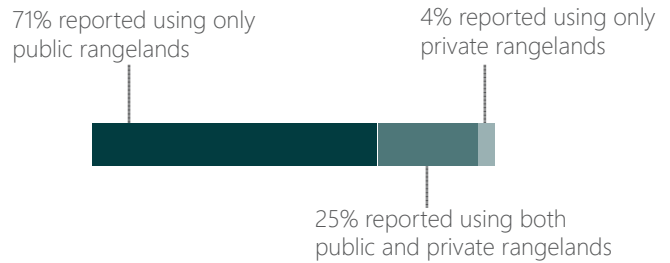


Previous assessments in the region indicate that during drought periods herders are often compelled to sell assets, including portions of their herd or even household possessions, to purchase food and water for the remaining livestock.⁶ As such, pasture health likely plays a critical role in maintaining the balance between the cost of supplemental feed required to sustain livelihoods and the availability of natural forage resources.

Public or Private Land

In Pump Khana, public rangelands appear as the backbone of livestock grazing. A large majority of surveyed HHs (71%) reported depending solely on public pastures, while 25% use a mix of public and private land. Only 4% rely exclusively on private land. These figures point to the importance of public grazing areas in sustaining local herds.

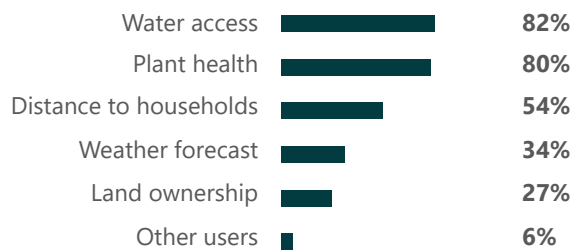
% of surveyed HHs that reported whether they make use of public or private rangelands for grazing



Pasture Selection

The most reported factors for selecting pastures were water access (82%) and plant health (80%), followed by distance to the household (54%) and weather conditions (34%). In contrast, land ownership (27%) and the presence of other users (6%) seemed to play a relatively minor role in pasture selection.

Factors reported in the selection of pastures for grazing, by % of HHs⁷



SUMMARY

- Livestock production seems to be central for both income and household consumption, with most households prioritizing home use.
- A majority of households rely on supplemental feed in addition to pasture grazing, likely due to low plant cover and low productivity.
- Public rangeland is vital, with 71% of households reporting to depend exclusively on it, while only a small minority reportedly use private land alone.
- Households reported selecting pastures mainly based on ecological factors such as water access and plant health, followed by distance to households.



PASTURE AND RANGELAND USE PATTERNS

Seasonality and Rotation

Seasonality

Households in Pump Khana reported relying most heavily on pastures in spring, when natural grass availability peaks. In contrast, during autumn and winter, pasture productivity declines sharply. Most respondents reported that pastures provide insufficient forage during these months. While Pump Khana experiences an arid climate with most precipitation received in spring, the decline in pasture conditions over the seasons is likely exacerbated by the dry conditions witnessed over the past years.⁸

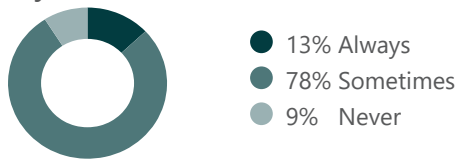
% of surveyed HHs that reported seasonality of grazing, pasture productivity and seasonality of forage

Seasons	In which season		
	Do you use pastures?	Is there most grass on pastures?	Does the pasture not have enough feed?
Spring	100%	100%	0%
Summer	41%	16%	16%
Autumn	0%	0%	84%
Winter	16%	9%	84%

Rotation Cycles

Rangeland rotation seems to be a common but inconsistently practiced method among households in the manteqa. While 78% of households reported rotating their grazing areas sometimes, only 13% do so consistently, and 9% reported never using rotation. This uneven application may contribute to uneven demand pressure on pastureland and may hinder pasture

% of surveyed HHs that reported regularly rotating rangeland they use

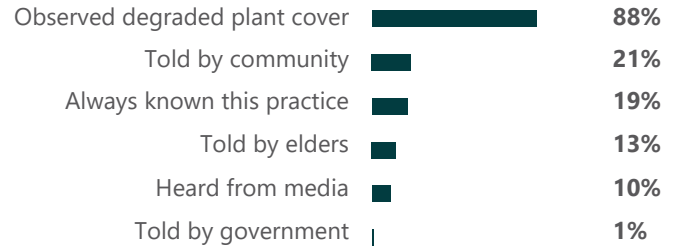


Reasons for Rotation

Most households practice rotational grazing primarily due to direct observation of degraded plant cover (88%), indicating a strong reliance on visual environmental cues. While this can be a successful strategy to fine-tune the timing of rotation, practitioners in other contexts suggest that adequate residual stubble height of the plant cover is a core requirement for successful regeneration.⁹

With key informants highlighting concerns about pasture degradation and decreasing pasture areas, it is likely that the cues used to decide when to shift pastures are not well aligned with the regrowth needs of the manteqa's plant cover.

Reported reasons for rotation, in % of HHs¹¹



Key Informants, in turn, indicated that knowledge on rotational grazing, locally known as "quruq" has been passed down through generations, but that no other formal mechanisms to manage pastures exist. In addition, they pointed out that pastures are often shared between communities, which may hint at the role of community elders and villagers in coordination around pasture use.

Length of Pasture Stay

Survey data suggests that households have their livestock remain on a single pasture for an average of 84 days. It is unclear whether this period represents continuous use or is divided into shorter grazing bouts within paddocks, but if concentrated, such extended use could risk overgrazing and limit pasture recovery.¹⁰

84 Average number of days surveyed HHs keep their livestock on a single pasture

KIs reinforced this concern, pointing to the inefficiency of rotational grazing and rising livestock numbers exceeding carrying capacity, both of which contribute to pasture degradation.

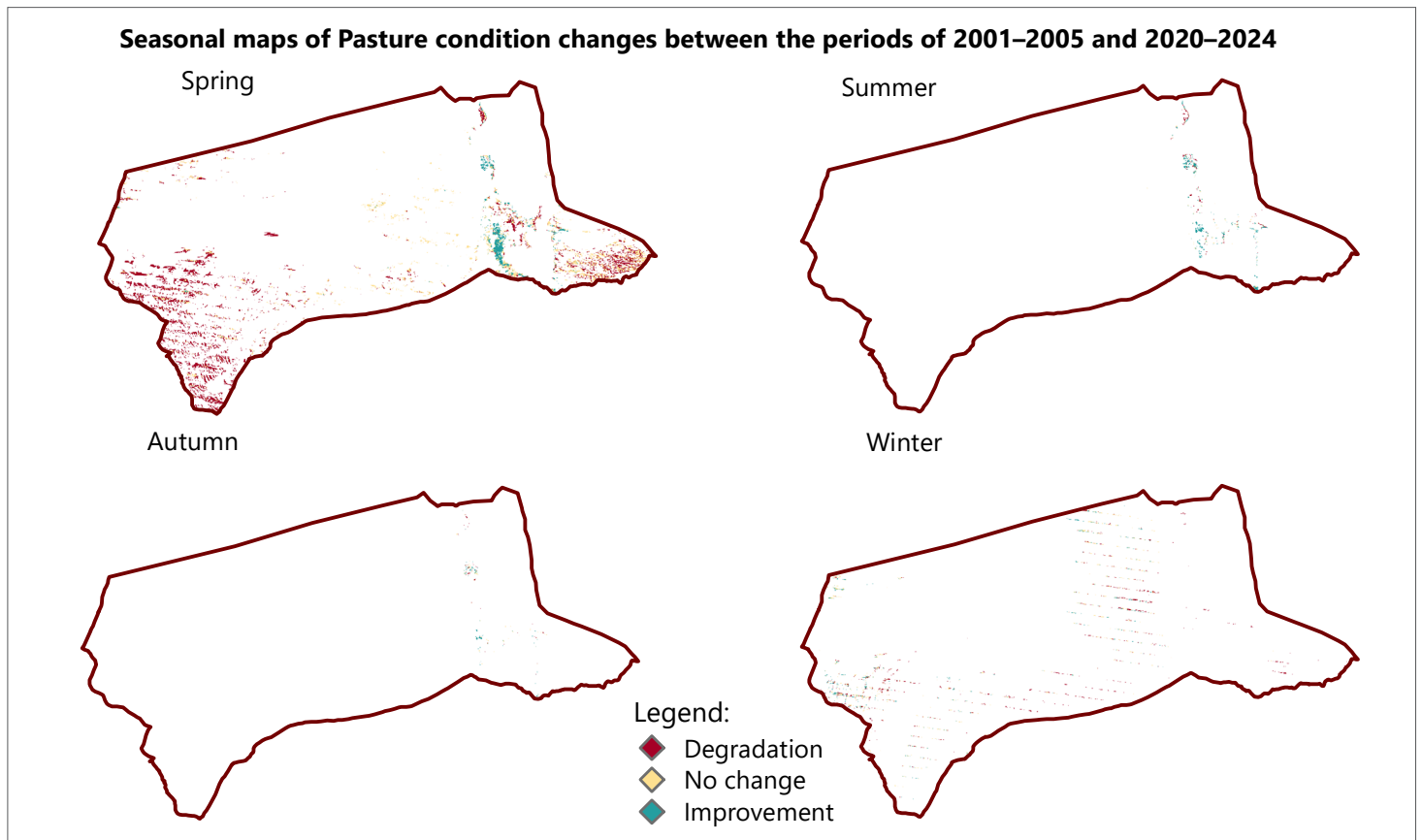
SUMMARY

- Seasonal pasture use appears to be highest in spring, while autumn and winter bring significant forage shortages, potentially increasing pressure on already fragile rangelands.
- While most households were aware of rotational grazing, only a small portion reported consistently practicing it; the majority seem to rotate irregularly, and some not at all.
- Local knowledge and community advice, especially from elders and peers, seem to play a much larger role in shaping grazing practices than external sources like NGOs or government.
- Households reported that they keep livestock in a single pasture for an average of 84 days, though it is unclear if this is continuous or broken into shorter grazing periods.



CONDITION, PRESSURES, AND DRIVERS OF LAND USE

Map 2: Pasture Condition Changes Between 2001-2005 and 2020-2024, Pump Khana Manteqa



Pasture Conditions

Satellite imagery and vegetation indices, primarily Normalized Difference Vegetation Index (NDVI) and related spectral measure help track seasonal and interannual changes in vegetation cover. Degradation has affected small pockets of pasture area year-round, mainly in spring, but affects much of the higher-altitude areas in the west and east of the manteqa furthest from the main settlements, perhaps as a result of weaker regulation, coordination, or localized precipitation trends. At the same time, improvements are also most visible in spring, but confined to areas around the manteqa's settlements and along its rivers.

Summer and autumn remain largely stable, with limited changes, but minor improvements in the lower-altitude area around the manteqa's settlements and rivers, especially in summer. Winter maps reveal few observable changes, but mixed patterns of degradation and improvement in specific areas, likely as pastures experience least demand pressure in this season. As findings from both the HH survey and KIIs suggest, pasture degradation in the manteqa is a widely perceived challenge, and it is likely that at least in some areas accessible pasture area has indeed declined as a result. At the same time, at least some pasture areas seem to have improved versus the reference period, despite dry conditions over the past years. It is unclear what has caused these improvements, but stronger coordination or limits on which animals can graze certain pastures, as one KI suggested, may have contributed to these changes.

DEFINITIONS

- Degradation** here refers to a decline in plant growth and cover, shown by lower satellite greenness index values in the recent period (2020-2024) compared to the baseline (2001-2005).
- Improvement** here refers to an increase in plant growth and cover, shown by higher satellite greenness index values in the recent period (2020-2024) compared to the baseline (2001-2005).

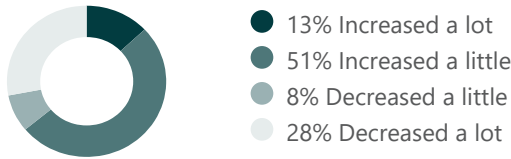
CONDITION, PRESSURES, AND DRIVERS OF LAND USE

Pastoral Shifts (2019-2024)

Changes in pastureland

Over the past five years, households seem to have experienced varied changes in pasture accessibility. A majority (51%) reported a slight increase in pasture area, while 13% saw a significant increase. In contrast, 28% experienced a major decrease, and 8% noted a minor decline. These shifts likely reflect localized environmental changes or seasonal variations, rather than uniform trends across the manteqa, as shown by remote sensing analysis findings.

% of surveyed HHs that reported changes in accessible pasture area for their HHs over the past 5 years



Pasture Availability

All surveyed households reporting decreases in pasture accessibility attributed this to barren pastures (100%), indicating substantial degradation in at least some parts of the manteqa. Additionally, 68% cited increased livestock numbers from other users, signifying increased competition over shared grazing areas. A smaller portion (14%) mentioned that pastures have been converted for other uses, such as rainfed agriculture. These findings highlight both environmental and social pressures affecting pasture availability. Remote sensing analysis showed degradation in areas distant from villages. This spatial pattern may help explain why only a majority of households reported decreased vegetation.

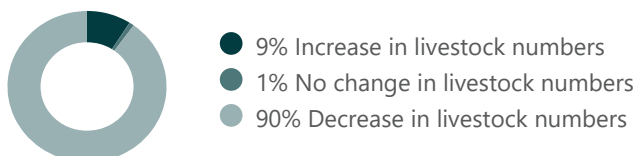
Reported reasons for a decrease in accessible pasture area in % of HHs¹²



Changes in Livestock Numbers

Most households (90%) reported a decrease in livestock numbers over the past five years, while only 9% saw an increase, and 1% experienced no change. This suggests a widespread decline in livestock holdings, possibly due to economic pressures.

% of surveyed HHs that reported changes in livestock numbers over the past 5 years



However, KIs noted a loss of communal pasture areas, pastures having been converted into rainfed agricultural land, and dry conditions affecting pasture health. In addition, they pointed to a rise in livestock numbers in the manteqa, indicating that the manteqa's pastures are already at their limits.

SUMMARY

- Remote sensing analysis indicates varied pattern of change, with pastures in the manteqa's most remote areas most affected by degradation, but observable improvements around its main settlements.
- Pasture access trends over the past five years show mixed results, with most households reporting a slight increase, although some saw a major decrease, and a smaller group experienced a significant increase.
- The main reported reason for reduced pasture access was barren land, followed by increased livestock competition and conversion of pasture to agriculture.
- Livestock numbers seem to have declined, with most households reporting a decrease.



BARRIERS AND ENABLERS FOR PASTURE MANAGEMENT

Household-level Coordination

Community coordination on pasture use seems to be mixed. 42% of households reported a high level of engagement, regularly consulting others, while 49% engage with others only occasionally. Only 9% make decisions with little to no consultation, indicating varied levels of collaboration in pasture management, likely reflecting private pasture ownership levels, owned by individuals or households.

% of surveyed HHs regularly engaging with pasture management actors



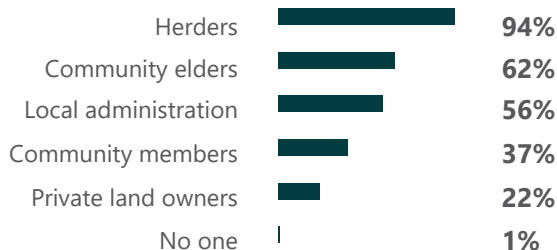
- 42% High Engagement
- 49% Medium Engagement
- 9% Low Engagement

Key informant indicated that communities are very involved in pasture management, with no reported conflicts over pasture use within the manteqa, but minor disputes with non-manteqa residents.

Coordination mechanisms

Most households reported consulting with herders (94%), followed by community elders (62%) and local administration (56%) for pasture use. Fewer engage with other community members (37%) or private landowners (22%).

Pasture management actors surveyed HHs reported engaging with, in % of HHs¹⁴

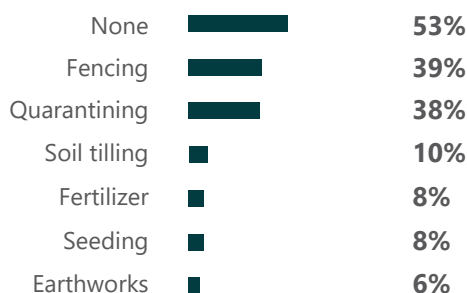


One key informant noted that two individuals in the manteqa had been appointed for coordination on pasture use with local authorities.

Restoration Efforts

Most households (53%) reported not to have taken steps to improve pasture health. For those who reported having done so, fencing (39%) and quarantining (38%) were the most common methods, while fewer seem to rely on soil tilling (10%), fertilizer (8%), seeding (8%), or earthworks (6%).

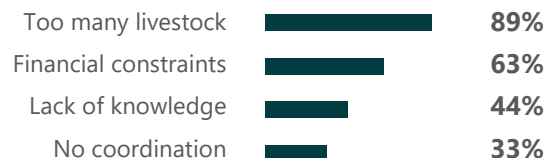
Have you taken any steps to improve pasture health yourself¹⁶



Challenges to Improving Pasture Health

Households face several challenges in improving pasture health. The most commonly reported issue were too many livestock to implement any pasture restoration activities (89%), followed by financial constraints (63%), a lack of knowledge (44%), and a lack of coordination (33%), suggesting that external extension services such as technical support from government including NGOs' technical support, could help address some challenges locally.

Reported challenges to improving pasture health in % of HHs¹⁵



Information About Improved Farming

Households reported learning about improved farming practices primarily through village leaders (71%) and INGOs (57%), followed by government sources (47%). Many also observe other farmers (43%) or hear directly from them (37%), showing that peer networks and local leadership play a key role in agricultural knowledge sharing. This suggests that interventions may be more effective when they build on existing community-based systems.

Reported sources of information on improved agricultural practices, in % of surveyed HHs¹³



SUMMARY

- Community coordination around pasture use seems to be common, with most households consulting herders, elders, and local authorities. No major conflicts were reported within the manteqa, although minor disputes seem to occur with non-manteqa residents.
- Restoration efforts seem to be limited. Over half of households reported not having taken action themselves. Among those who have, quarantining, fencing, and soil tilling were the most commonly reported methods.
- Reported challenges to pasture regeneration efforts included excessive livestock numbers, financial constraints, lack of knowledge, and weak coordination.
- Information sharing about improved farming practices seems to be driven by informal networks, especially peers and village leaders, but INGOs and governmental sources also seem to play a role.



METHODOLOGY OVERVIEW

The Pasture Management Assessment utilized mantedgas as the primary unit of analysis. Mantedgas are locally recognized geographic areas smaller than districts but larger than individual settlements, defined by shared natural resources, socio-economic ties, and customary governance structures. In the five assessed mantedgas, data was collected through a combination of household (HH) surveys and key informant interviews (KIIs), including local herders and natural resource management stakeholders.

The sampling approach for the HH survey employed a two-stage stratified cluster methodology. Settlements were first randomly selected within each mantedga, followed by random selection of households within those settlements. A minimum of six households were surveyed per settlement, with quotas split evenly between households engaged in irrigated agriculture and those relying on pasture-based livestock. To ensure inclusivity, female enumerators conducted interviews with women where access was permitted, including remote interviews in restricted areas. In Pump Khana, a total of 61 HH interviews were conducted, 18 of which with female-headed

HHs. KIIs were conducted with 1 herder and 2 district-level officials from the relevant line department.

In parallel, remote sensing analysis was conducted using Landsat-based spectral indices to assess historical changes in pasture health and land cover. This geospatial component enabled triangulation of field data with satellite imagery to identify trends in degradation and land use conversion over time.

Limitations:

- Exact proportions of mantedga residents engaged in livestock agriculture in this mantedga are unknown. Findings presented in this output should therefore be considered indicative
- Access constraints limited in-person interviews with women in some areas, potentially affecting gender-disaggregated insights.

For more information on the methodology, please refer to the Term of Reference ([TOR](#)).

ENDNOTES

1 REACH Afghanistan. Drought Impact and Resilience in Agro-Pastoral Communities in Northwest Afghanistan, Pump Khana Mantedga, 2025 [Link](#).

2 A mantedga is a geographic unit in Afghanistan, typically larger than a village but smaller than a district. It often comprises multiple villages that share social, economic, or geographic ties.

3 REACH Afghanistan Mantedga Profiles, 2023. Available on request.

4 REACH Afghanistan Pasture and Irrigation Assessment, 2025. HH surveys for both assessments were carried out at the same time with a combined sampling. Findings for demographic indicators across both assessments are statistically representative at 95/10 for the mantedga.

5 REACH Afghanistan. Drought Impact and Resilience in Agro-Pastoral Communities in Northwest Afghanistan, Pump Khana Mantedga, 2025

6 Respondents could select more than one option.

7 Respondents could select more than one option.

8 REACH Afghanistan. Drought Impact, Pump Khana Mantedga.

9 UWM Crops and Soils Division of Extension. "Meeting the Needs of the Animal and Forage Plant through Grazing Management." [Link](#)

10 WSU Extension. "Optimizing Pasture and Animal Production through Planned Grazing." [Link](#).

11 Respondents could select more than one option.

12 Respondents could select more than one option.

13 Respondents could select more than one option.

14 Respondents could select more than one option.

15 Respondents could select more than one option.

16 Respondents could select more than one option.

About AGORA

AGORA is a joint venture between Acted and IMPACT Initiatives created in 2016 to operationalise our motto « Think local, Act global ». It is an innovative area-based approach that aims to better address the relief, environmental and development needs of people in fragile contexts through a NEXUS approach.

The key value added of AGORA is:

- Working at the **right geographical scale**, enabling both meaningful engagement with local actors and the ability to scale-up the action
- Contextualising action through a strong evidence-base and reliance on **local knowledge** to inform programme approaches
- Putting local actors at the centre** by strengthening their capacity, enabling them to identify their own needs and response priorities through participative research and planning approaches, and to participate and monitor implementation
- Linking local and external actors** so that the latter can contribute resources and capacity to implement local solutions and response priorities.

AGORA strengthens territorial resilience by enabling a wide range of programmes, including strengthening local governance, improving basic services and livelihoods, climate change adaptation and mitigation, improving natural resources management, disaster risk reduction and management, anticipatory action, or supporting durable solutions to displacement.

AGORA has already been piloted in **17 countries through 20 projects**, reaching approximately **1,8 million direct beneficiaries** and supporting **nearly 1,294 organisations**.

