

Pasture Management in Shadyan, Balkh

June, 2025 | Shadyan Manteqa, Balkh Province, Afghanistan

KEY MESSAGES

- **Livestock production in Shadyan relies heavily on both rangelands and supplemental feed, with pasture use shaped by ecological and practical factors such as plant health, water access, and land ownership.**
- **Pasture use in Shadyan is highly seasonal, with heavy reliance in spring but sharp declines in summer and winter; while most households practice rotation, inconsistent application and prolonged grazing periods increase pressure on rangelands.**
- **Despite minor increases in accessible pastureland, the prevalence of barren areas, restricted access, and declining livestock numbers, driven by drought and limited financial resources, underscore growing environmental and social pressures on rangeland sustainability.**
- **Household engagement in pasture management is uneven, while some HHs actively consult others, many participate only occasionally, highlighting the need for stronger coordination and support.**

CONTEXT & RATIONALE

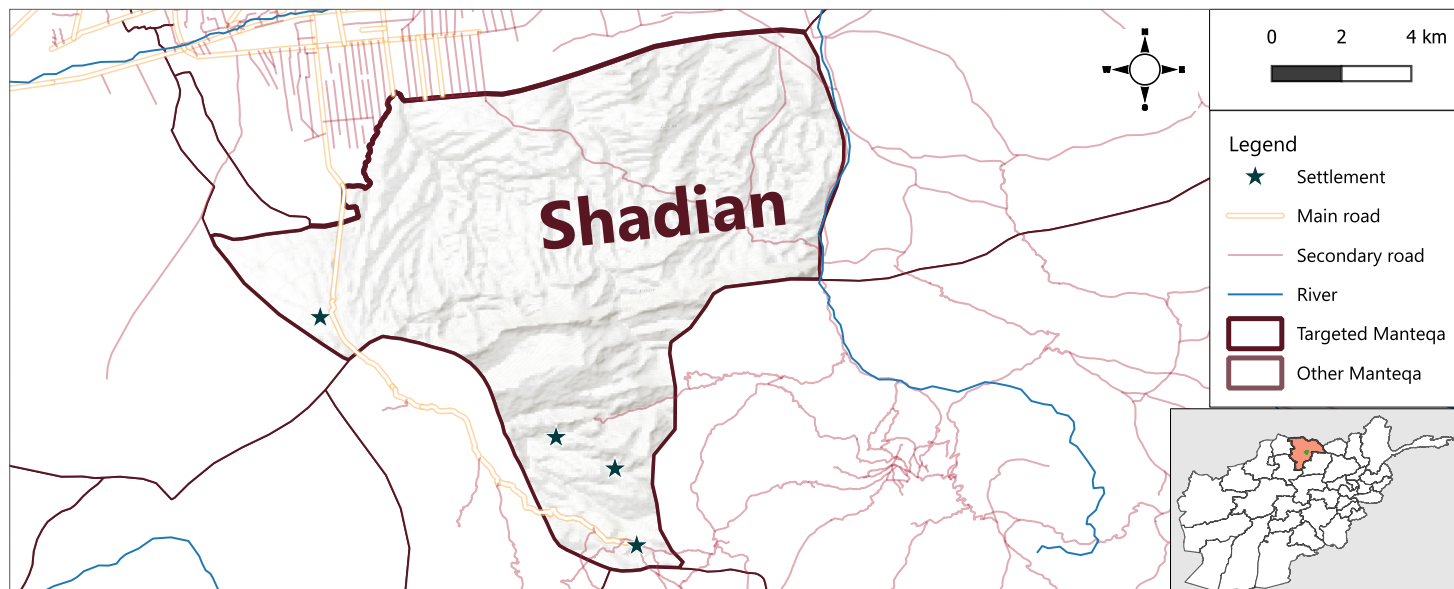
The convergence of prolonged environmental stress, socio-economic hardship, and limited institutional capacity has placed rural communities in Northwest Afghanistan under increasing pressure. In areas where livelihoods are heavily dependent on agriculture and livestock, recurring droughts, land degradation, 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-V (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).

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](#).

Map 1: Shadyan Manteqa



PASTURE AND RANGELAND USE PATTERNS

Introduction

Shadyan is located in Balkh Province, comprising six villages with an estimated 925 households (6,250 individuals).³ Less than 17% of the population are returnees and around 6% are internally displaced persons (IDPs).⁴ According to a previous assessment, most of Shadyan’s residents rely on agriculture for their livelihoods, and around 19% of its area are considered pastures.⁵

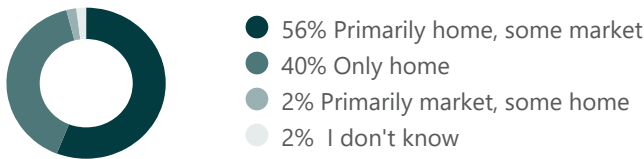
Shadyan’s pasture use reflects the interplay between harsh climatic conditions, limited forage windows, and socio-economic pressures. Household surveys and key informant interviews provided insight into seasonal grazing patterns, decision-making processes, and management practices that shape rangeland use across its communities.

Household-level Pasture Use

Home Consumption and Commercial Farming

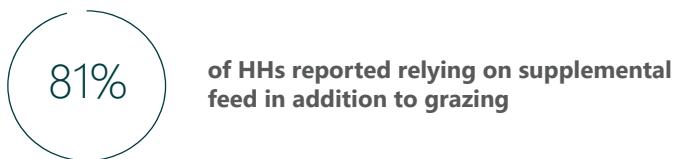
For most of the households, livestock farming is mainly for home consumption. About 56% of households farm primarily for home use but also sell some products, while 40% farm only for home consumption. This highlights that, despite widespread market activity, livestock remains essential for household food needs.

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



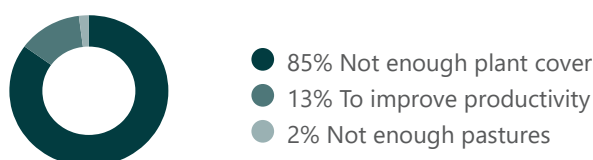
Grazing and Supplemental Feed

Supplemental livestock feed seems to play a central role in the manteqa’s livestock sector. 81% of households rely on a combination of grazing and supplemental feed to sustain their animals. In contrast, only 19% depend solely on grazing, supporting the idea that natural pasture alone is often insufficient to meet the nutritional needs of animals in the region.



Most households use supplemental feed for livestock due to environmental challenges. 85% cited insufficient plant cover as the main reason, while 13% use it to boost productivity, and only 2% mentioned a lack of pastureland. This highlights that feed use may be largely driven by poor natural grazing conditions.

% of HHs that reported reasons for using supplemental feed

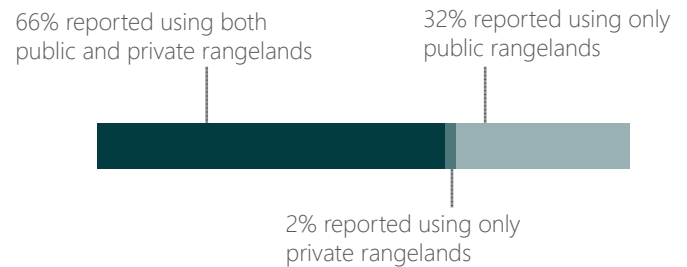


Previous assessments in the region indicate that during drought periods herders are often compelled to sell assets, including portions of their herd or even household possessions, to purchase food and water for the remaining livestock.⁶ As such, pasture health likely plays a critical role in maintaining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

Public or Private Land

Most herders in Shadyan depend on public rangeland to some extent. While private rangeland may serve as a buffer for 67% of households who use both public and private land, this indicates that public pastures remain indispensable for sustaining herds.

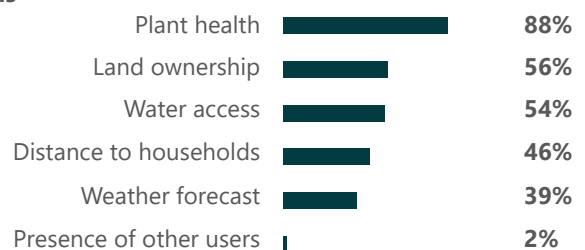
% of HHs that reported whether they make use of public or private rangelands for grazing



Pasture Selection

HHs choose grazing pastures mainly based on plant health (88%), followed by land ownership (56%), water access (54%), and distance to the household (46%). Weather conditions (39%) also influence decisions, while the presence of other users (2%) is rarely considered. This suggests ecological and practical factors are the top priorities in pasture selection.

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



SUMMARY

- Livestock farming seems to primarily sustain household needs, with a portion also sold in the market.
- Households seem to combine grazing with supplemental feed to balance limited natural vegetation.
- Public rangeland is reportedly extensively used and critical for herding.
- Pasture choice appears to depend mostly on ecological and logistical factors like plant health, land ownership and water access.



PASTURE AND RANGELAND USE PATTERNS

Seasonality and Rotation

Seasonality

Households in Shadyan 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 Shadyan 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

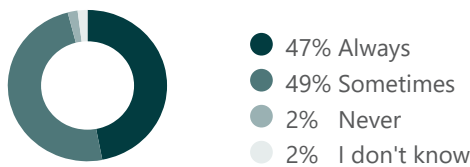
% of HHs that reported seasonality of grazing, pasture productivity and seasonality of forage

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	60%	18%	37%
Autumn	5%	0%	65%
Winter	0%	0%	95%

Rotation Cycles

According to survey data, most HHs in the manteqa practice rangeland rotation. 47% of households always rotate the rangeland they use, while 49% do so sometimes. Only 2% never rotate, and another 2% are unsure. This indicates that rotation is widely adopted, though not consistently applied, which may contribute to increased pressure on grazing lands.

% of HHs that reported regularly rotating rangeland they use

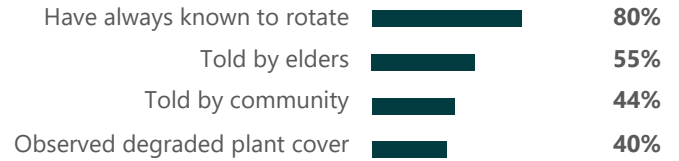


Reasons for Rotation

Households practice rangeland rotation. The most common reason, reported by 80% of households, is that they have always known to rotate, indicating a traditional understanding of the practice. 55% said they were told by elders, showing the influence of generational knowledge. 44% were advised by the community, and 40% began rotating after observing degraded plant cover, reflecting environmental awareness. This mix of tradition, community guidance, and ecological observation seems drive the rotation practice.

Practitioners in other contexts suggest that adequate residual stubble height of the plant cover is a core requirement for successful regeneration.⁹ With KIs highlighting concerns about overgrazing and vegetation loss, it is likely that rotational grazing practices in the manteqa are not sufficiently adapted to allow for adequate recovery.

Reported reasons for rotation, in % of HHs¹¹



Local governance likely plays important role in pasture management, a dynamic that could be leveraged by external actors. KI perspectives echo this, highlighting the potential for NGOs to provide technical training, financial support, and collaborative management approaches that could strengthen both community practices and capacity.

Length of Pasture Stay

Survey data suggests that households have their livestock remain on a single pasture for an average of 58 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

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

KIs reinforced this concern, stressing that overuse is the main challenge in Shadyan Manteqa. They pointed out that drought has stripped vegetation, leaving several areas barren and contributing to pasture degradation. Moreover they reported, there is no clear legal framework for pastureland use, nor any serious enforcement to support its restoration.

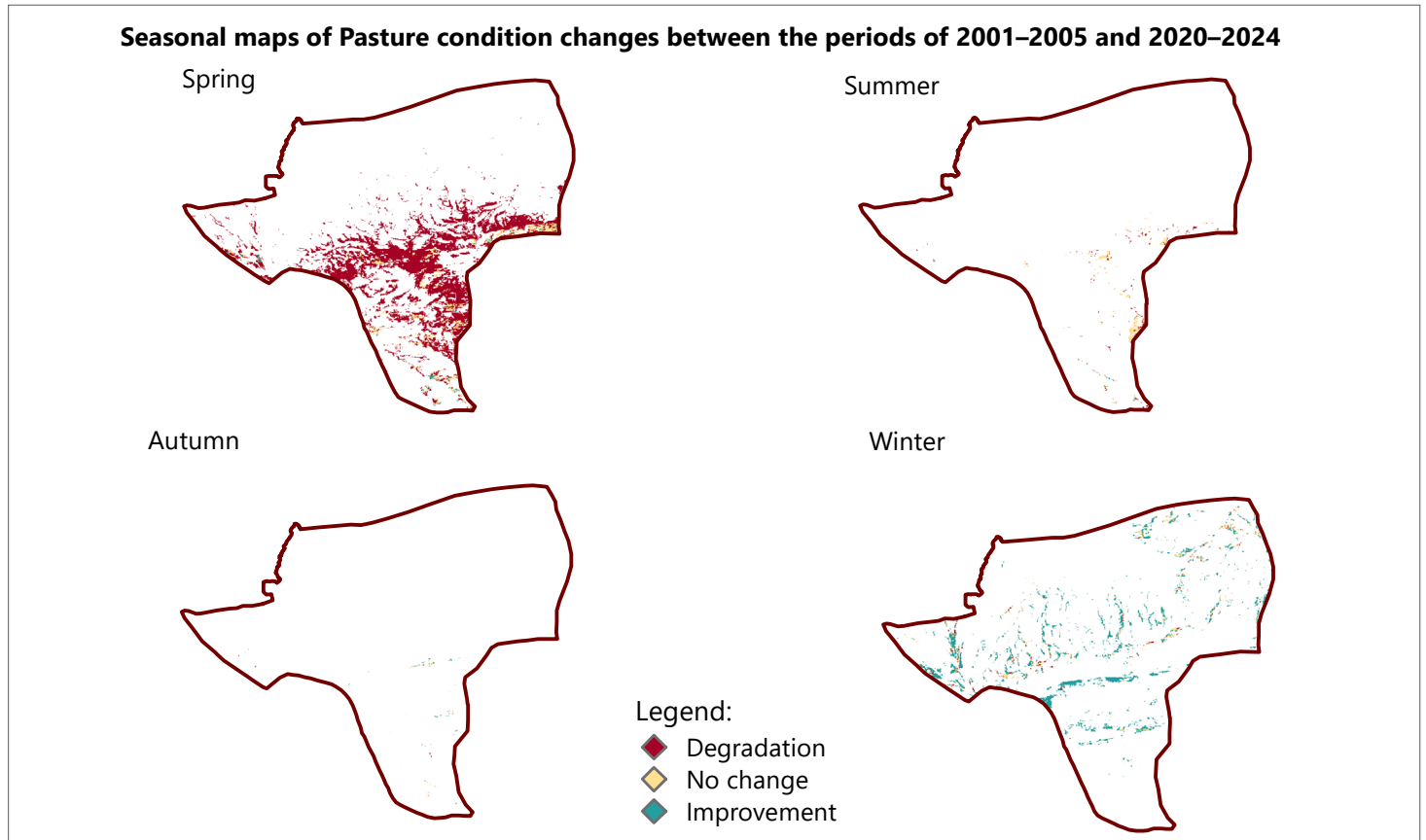
SUMMARY

- Households in Shadyan appear to rely heavily on pastures during spring when grass is most abundant; pasture productivity drops sharply in summer, autumn, and winter due to dry conditions.
- Most households seem to practice rangeland rotation, though the frequency varies, some rotate always, others only sometimes.
- Rotation is seems to be mainly driven by tradition, community advice, and environmental observation.
- On average, livestock reportedly stay on a single pasture for about two months.
- Key challenges likely include seasonal forage shortages, inconsistent rotation practices, and signs of vegetation degradation, highlighting the need for improved pasture management



CONDITION, PRESSURES, AND DRIVERS OF LAND USE

Map 2: Pasture Condition Changes Between 2001-2005 and 2020-2024, Shadyan 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. An analysis comparing 2001–2005 with 2020–2024 shows clear seasonal shifts in pasture condition across Shadyan Manteqa (see Map 2). In spring season widespread degradation is visible, particularly in the southern part of the manteqa, likely due to early grazing and reduced rainfall. Summer and autumn show mostly stable conditions, with little change due to naturally low rainfall and limited pasture use. In winter, pasture conditions have improved, especially in northern and central areas, likely due to earlier seasonal warming and changing precipitation patterns. However, as shown on the first page, no households reported using pastures in winter, with 95% reporting that pastures don't have enough feed during these months. These patterns reflect the strong influence of climate, geography, and land use on pasture health.

Findings from the KIs indicate that pasture degradation is broadly perceived as a major challenge in the manteqa. According to key informants, in earlier years they depended on naturally occurring pastures: there was ample rainfall, abundant grass, and no restrictions on grazing. However, recent droughts have raised serious concerns about the sustainability of these pastures. KIs reported that the quality and availability of pasture have deteriorated, particularly during late summer and autumn, when there is insufficient grass and feed for livestock. These droughts have had a severe impact, leading to widespread degradation and reduced access to grazing land.

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).

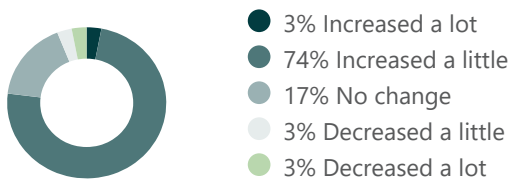
CONDITION, PRESSURES, AND DRIVERS OF LAND USE

Pastoral Shifts (2019-2024)

Changes in pastureland

A large majority of households (74%) reported that pasture area has increased a little, while 3% saw a large increase. In contrast, 6% experienced a decrease (split between small and large), and 17% reported no change. These varied responses suggest that pasture conditions may be shifting locally, influenced by seasonal factors and environmental changes observed through remote sensing.

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



Pasture Availability

Among the 6% of households that reported a decrease in pasture land, the most commonly cited reason, mentioned by 75% of these HHs, was that the pastures have become barren, likely due to overuse or environmental degradation. Additionally, 25% of households mentioned increased livestock numbers from other users, restricted access by landowners, and other reasons, such as the conversion of rangelands into farmland. These findings highlight how both environmental and social factors are limiting pasture access.

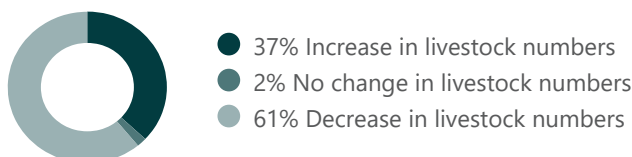
Reported reasons for a decrease in accessible pasture area in % of HHs¹²



Changes in Livestock Numbers

Household reported changes in livestock numbers over the past five years. A majority (61%) experienced a decrease in livestock, while 37% reported an increase, and another 2% saw no change. This suggests that more households are facing challenges that reduce livestock holdings, possibly due to environmental, economic, or land access pressures.

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



In contrast, KIs observed an increase in livestock numbers surpassing the carrying capacity of pastures in the manteqa, suggesting that these rangelands are already at their limit and face the risk of overgrazing without collective strategies for managing shared natural resources adapted to current conditions in the manteqa.

SUMMARY

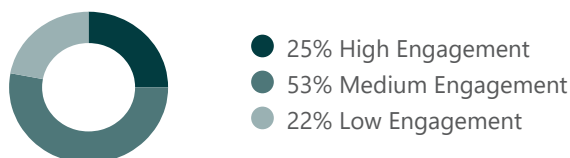
- Analysis indicates a seasonal redistribution of pasture health, with improvement during winter, degradation during spring, and relative stability during summer and autumn.
- Most households reported a slight increase in accessible pastureland between 2019 and 2024, while fewer experienced no change or a decrease.
- The most cited reason for reduced access was barren pastures, followed by increased livestock competition, restricted access by landowners, and land conversion to agriculture.
- Over half of households saw a decrease in livestock numbers, while others reported increases or no change.
- These shifts reflect the impact of climate, grazing pressure, and land use changes on pasture sustainability.

BARRIERS AND ENABLERS FOR PASTURE MANAGEMENT

Household-level Coordination

Household engagement in community coordination around pasture use shows that 25% of households are highly engaged, regularly consulting multiple actors before deciding which pastures to use. The majority (53%) have medium engagement, occasionally seeking inputs from others. Meanwhile, 22% show low engagement, and likely tend to make decisions around pasture use independently.

% of HHs regularly engaging with pasture management actors



Key informants noted a lack of organized practices for managing pastureland, likely due to limited financial resources and weak coordination among households in pasture management.

Coordination mechanisms

The most commonly consulted group by HHs were herders, with 91% of households reporting interaction. Additionally, 54% of households reported consulting private landowners, and 53% consulted community elders. Community members were reported to be consulted by 32% of households, while only 2% reported engaging with no one.

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

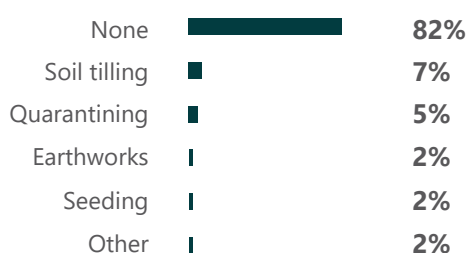


Although households reported frequent consultations with peers and community elders, key informants noted that conflicts often arise during drought years. These interactions do not always prevent conflicts, as tensions with nomadic and external groups occasionally occur, particularly over access to pastureland.

Restoration Efforts

Most households (82%) reported taking no steps to improve pasture health. Among those who acted, soil tilling (7%) was the most common, followed by quarantining (5%), while earthworks, seeding, and other methods were each used by only 2% of households.

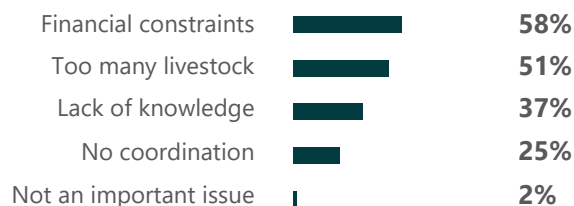
Have you taken any steps to improve pasture health yourself¹⁶



Challenges to Improving Pasture Health

Households seem to face significant barriers to pasture restoration. The most commonly reported challenge was financial constraints (58%), followed by too many livestock (51%) and a lack of knowledge (37%). Other reported issues included poor coordination (25%). Only a small proportion considered pasture restoration unimportant, suggesting a high degree of community interest in restoration techniques if provided with the means to do so.

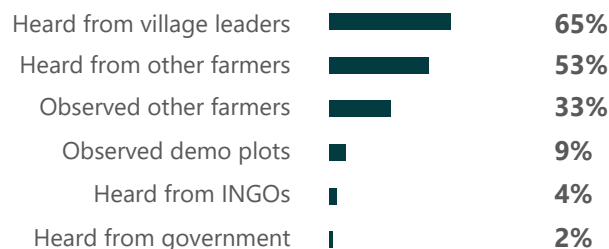
Reported challenges to improving pasture health in % of HHs¹⁵



Information About Improved Farming

Most households seem to rely on local networks for agricultural knowledge. Village leaders (65%) and other farmers (53%) were the main reported sources, while direct observation of farmers (33%) also played a role. Formal channels appear to be less common, with only 9% citing demo plots, 4% INGOs, and 2% government sources.

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



SUMMARY

- Household engagement in pasture management seems to vary, with some households actively consulting others and many only occasionally involved.
- Coordination reportedly relies heavily on herders, landowners, and community elders, but disputes reportedly still occur during stress periods like droughts.
- Some households reported taking measures to improve pasture health such as soil tilling, quarantining livestock, and reseeded, though overall participation is limited.
- Key reported barriers to pasture restoration included include financial limitations, excessive livestock numbers, lack of knowledge, and weak coordination.
- Information on improved farming practices appears to be mainly shared through village leaders and other farmers, while formal sources like NGOs and government seemed to be less common.



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 Shadyan, a total of 46 HH interviews were conducted, 11 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, Shadyan 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, Shadyan 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**.

