

Livestock Market Systems Rapid Assessment

Northeast Syria



THE STRAITS TIMES & AFP. (2021, April). Syrian farmer Mohammad Saasani walks with his flock of sheep and goats in the village of Ghezlaniah, in the countryside of the Badia region in Syria [Photograph].
<https://bit.ly/380Zfno>

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Executive Summary

In Northeast Syria, an estimated forty percent of households depend on crop and livestock-based livelihood activities to make a living. Livestock like sheep and goats serve as preferred livelihood assets for meat and nutritious milk provision for the people in the semi-arid climate areas. The unprecedented and extremely low rainfall level in the 2020–2021 winter season has induced stress on livestock production activities in NES, forcing some farmers to destock their livestock for incredibly low prices. The drought had an extended impact on the availability of livestock feed/fodder, forage and water resources; leading to a decline in livestock market value, increase in grain prices, and worsening of human food security. iMMAP conducted a rapid market system assessment to understand the role of livestock in livelihood, the nature and impact of the prevailing water scarcity, and the operating environment, potential logistical constraints, overlap or potential complementarity with other stakeholders along the livestock value chain in NES.

Key Findings

- The findings of this study clearly articulated that the livestock producers in NES are living in the alert and alarm phases of a drought emergency scenario.
- All study respondents reported water scarcity to be one of the major factors behind the recession in the livestock market value. Half of the study respondents reported that livestock producers who used to depend on rainwater collection, water wells and river water for livestock production switched to purchasing water/ water trucking in 2021.
- As a result of the drought and the continued SYP fluctuation against foreign currencies, livestock feed and fodder prices were influenced by experiencing inflation which had a double effect on the prices of live animals and livestock products. Most study respondents reported that animal feed/fodder products for the diverse types of animals were either not affordable or fairly affordable.
- The capacity of the Economic and Agriculture Commission (EAC), and the Agriculture Community Development Company (ACDC) in providing extension services, i.e., veterinary services and subsidized animal feed/fodder had been disrupted and failing to reach all registered livestock producers in NES

There were glaring funding gaps for livestock based-livelihood activities in NES. There is need for a holistic response plan to address the different components of the livestock market system, considering the drought emergency and the economic crisis. The study recommended emergency veterinary, animal feed/fodder and water distribution interventions to respond to the short-term drought emergency needs. Moreover, the study highlighted other early-recovery plans related to enhancing the veterinary skills of the local community, rehabilitating water infrastructure and provision of livestock at the recovery phase after the drought (when the environment is conducive for restocking).

1. Introduction

In Northeast Syria (NES), drought tolerant small livestock like sheep and goats serve as preferred livelihood assets for meat and nutritious milk provision for the people in the semi-arid areas where climate induced aridity is a cause for concern given low rainfall impact on pastures and rangelands. Livestock requires suitable nutrition, veterinary protection, a well-managed habitat, general good breeding, and management to maximize its productivity. The high degree of vulnerability of livestock-producing semi-arid climate areas is compounded by agro-pastoralism economic marginalization due to low rainfall leading to lack of forage exacerbated cessation of subsidies in livestock production by the Government of Syria. These factors affect feed intake and animal productivity, claiming numbers of livestock per year, perpetuating food insecurity and livelihoods loss as well as reducing the supply of primary products down the livestock value chains.

Raising livestock is a widely practiced activity by farmers in northeast Syria. This practice is aligned with other widely spread agriculture production activities, mainly wheat and barley. Locally produced meat and dairy products are more trusted and preferably consumed compared to imported products. Dairy products can be found on a commercial or household production levels, where upstream the value chain a range of smallholder farmers and commercial farms feed the production stream of the milk and dairy supply chains. However, the ongoing economic and political instability in NES, along with a growing water scarcity issue have disrupted the flow of the livestock value chain, particularly on the upstream side.

1.1. Study Objectives

1. Role of livestock in livelihood – to understand the role of livestock in livelihood across Northeast Syria (NES).
2. The nature and impact of the emergency – to understand the impact of low rainfall as it affects livestock-based livelihood and determine what types of interventions are necessary to improve livestock production. To understand the impact of hazards such as drought, pre-harvest and post-harvest fire on crops, declining economy... etc and how these affect components of the livestock value chain in NES.
3. Situation analysis – to understand the operating environment, potential logistical constraints, overlap or potential complementarity with other stakeholders along the livestock value chain in NES, including the most common livestock types and the livestock production systems in NES.

1.2. Methodology

Compared with human emergency assessments, livestock-based assessments may be more qualitative because they are based on the judgement of expert opinions. According to the Livestock Emergency Guideline Standards (LEGS), quantitative data collection and analysis are rarely feasible in livestock value chain assessments. For example, at present there is no livestock-based equivalent to rapid human nutritional assessment and no standard methodology for measuring livestock mortality in emergencies.¹ In that regard, the present study adopted a qualitative participatory approach by interviewing a range of experts and market actors. In addition, secondary information was compiled from the Economic and Agriculture Commission (EAC) in NES, and other useful secondary reports were incorporated in the analysis. The key informant interviews and secondary research/desk review were structured to cover the following indicators:

- Livestock (cattle, goats, sheep & poultry) asset holding level
- Livestock (cattle, goats, sheep & poultry) conception/reproduction
- Milk and meat (cattle, goats, sheep, buffalo) production
- Seasonal rainfall performance (Water availability)
- Livestock conditions and performance
- Income of poor households from agricultural activities
- Temperature and fires
- Pest and disease incidents
- Pasture/ranges in relation to forage availability and access

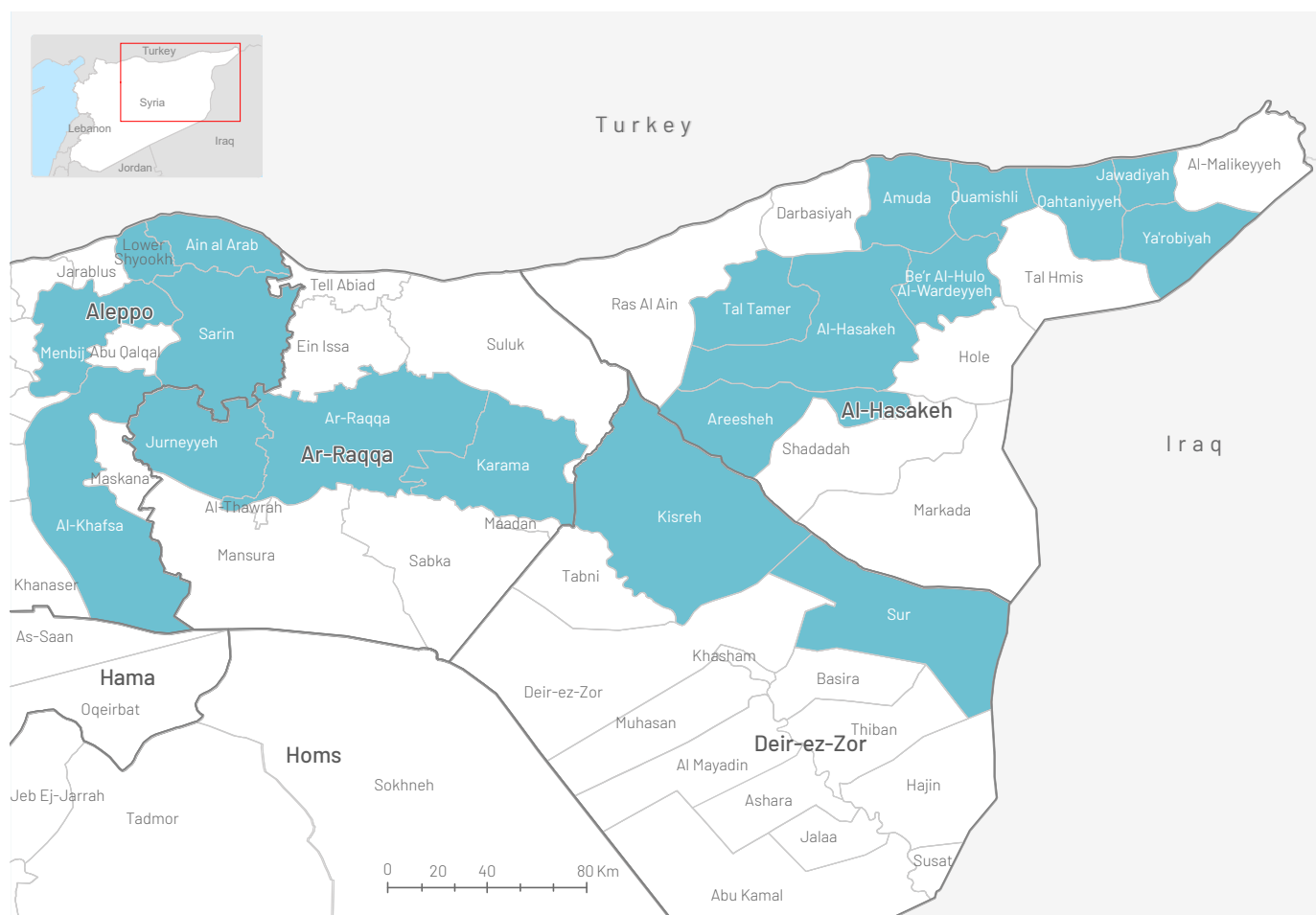
This assessment provides a Participatory Response Identification Matrix (PRIM), a framework designed to inform humanitarian partners to decide which types of livestock assistance are required in NES. The framework follows the lead of the LEGS. Reflecting the preliminary

findings of this assessment, the PRIM considers the three LEGS livelihood objectives of 1) providing immediate livestock-based benefits; 2) protecting assets; and 3) rebuilding assets against the range of possible technical interventions (destocking; veterinary support; feed/fodder support; water; shelter; and provision of livestock/restocking).

1.3. Data collection

IMMAP collaborated with nine implementing partners (ACTED, CARE, DanChurchAid (DCA), Mercy Corps, Norwegian People's Aid, Samaritan's Purse, SHAR, KRD and BAHAR) to conduct field data collection. A total of thirty-eight interviews were conducted with agriculture engineers, members of the local council, farmers/livestock producers, veterinarians, local organizations, and members of the Economic and Agriculture Commission (EAC). The data collection covered nineteen subdistricts in Aleppo, Al Hasakeh, Ar-Raqqa, and Deir-ez-Zor governorates.

Map 1: Data Collection Coverage Map



2. Livestock Market Environment in Northeast Syria

2.1. Economic and Agriculture Commission Role

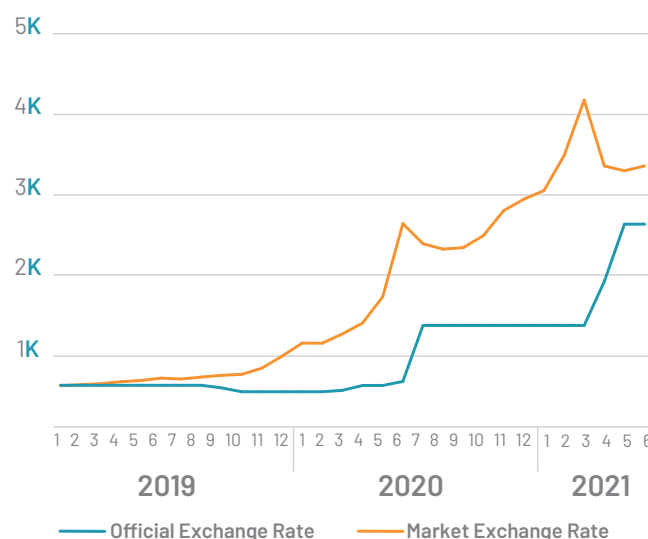
The central commissions and offices of the Autonomous Administration of North and East Syria (AANES) exercise a great deal of control over key sectors of the economy through their different specialized commissions. The Economic and Agriculture Commission (EAC) sets economic policies and regulates the agriculture sector through its different offices across the NES region. Particularly for the livestock sector, the commission provides support to livestock producers through subsidized fodder and feed, vaccination programs, subsidized medication, awareness, and capacity building services. A livestock headcount survey informs the distribution and allocation of such services. The current services provided by the commission are based on a livestock headcount survey conducted in 2018.

The current data is considered outdated, and as a result the study respondents raised concerns about the EAC's services, highlighting the limited reach of the commission specifically for veterinary and vaccination services. Due to the limited availability and reach of vaccination support, livestock producers are getting vaccines from private sector providers.

2.2. Currency Depreciation

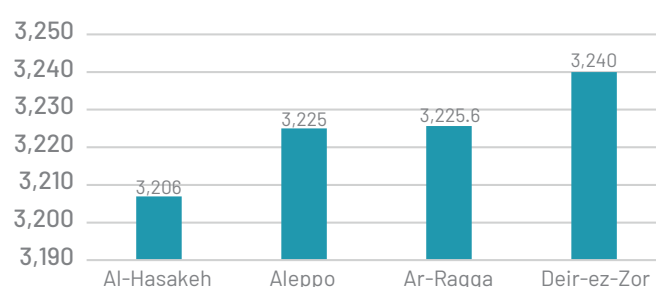
The first deep drop of the Syrian Pound (SYP) against hard foreign currency like the US Dollar (USD) since the start of the conflict was at the end of 2015, where SYP lost 714% of its value compared to its pre-conflict value in 2011.² The second drop was recorded in the third quarter of 2019. The extended impact of the local currency depreciation has affected all economic activities in Syria where the prices of agriculture inputs and food items have been on the rise since the second drop. The impact on the livestock production in northeast Syria was as significant, specifically with inflation of feed and fodder prices that had a double effect on the prices of live animals and livestock products.

Figure 1: Monthly Average Exchange Rate (2018-2021) - USD/SYP³



The market exchange rate (unofficial) used amongst traders and producers is higher than the official exchange rate. The average official USD/SYP exchange rate in August 2021 was 2,510 SYP to 1 USD,⁴ while the average exchange rate reported by study respondents at the time of data collection (July 2021) was 3,217.8 SYP to 1 USD. Some of the study respondents reported that USD is used for purchasing live animal heads instead of SYP, while the end products are mainly sold in SYP.

Figure 2: Average Reported SYP-USD Exchange Rate - July/August 2021



² The United Nations Economic and Social Commission (ESCWA) & University of St Andrews. (2016). Syria at War: Five Years On. The United Nations Economic and Social Commission (ESCWA). [Link](#)

³ The official exchange rate was retrieved from [WFP - VAM](#), August 2021, and the unofficial exchange rate was retrieved from [SYP-today](#), August 2021

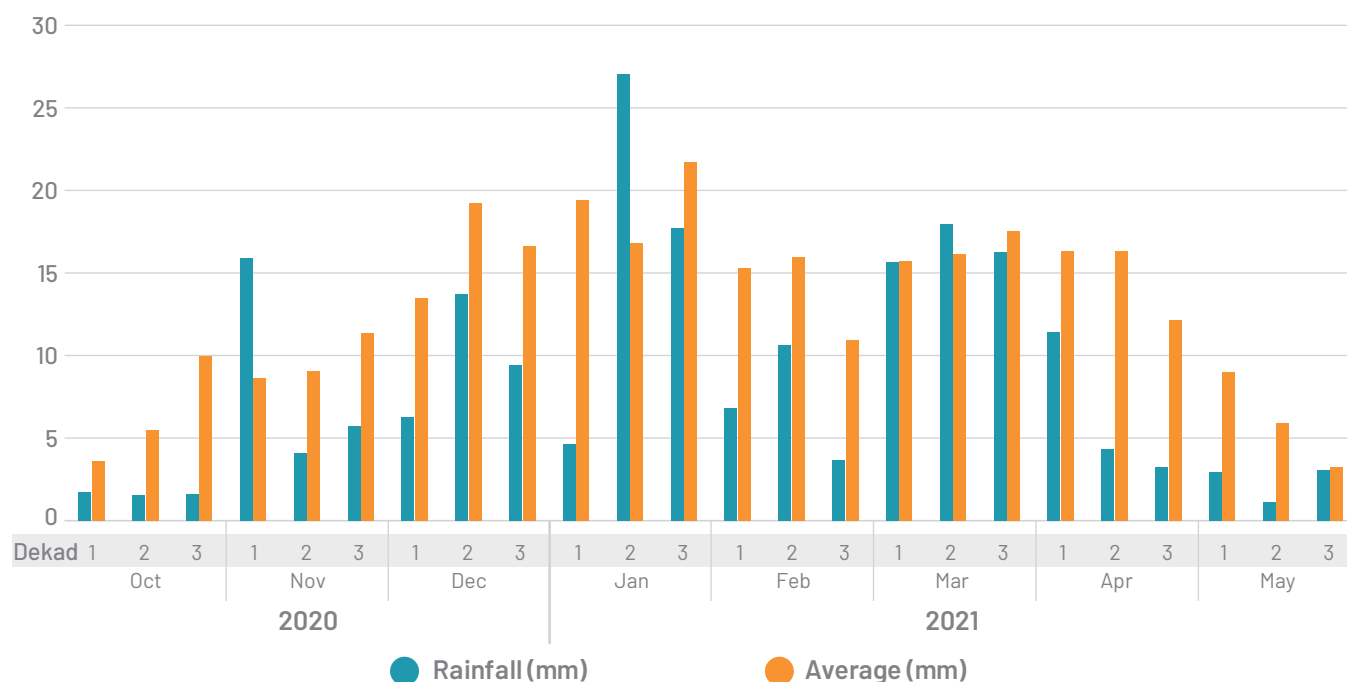
⁴ [WFP - VAM](#), Economic Explore, August 2021

2.3. Climate Change and Water Scarcity

Syria has faced an unprecedented and extremely low rainfall level in the 2020 – 2021 winter season that highly threatened the growth of green pasture and fodder raw materials, i.e., barley and wheat crops. All study respondents reported water scarcity to be one of the

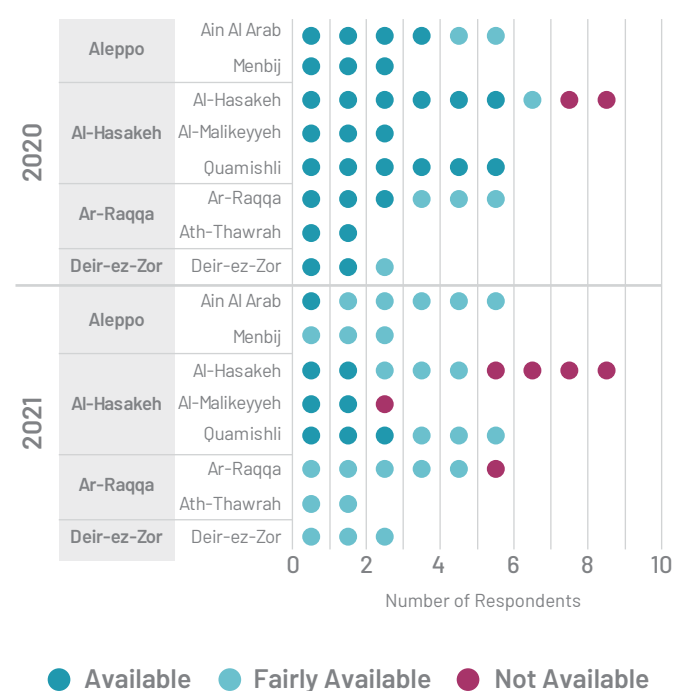
major factors behind the recession in the livestock market. Half of the study respondents reported that producers who used to depend on rain, water wells and river water for livestock production switched to purchasing water in 2021.

Figure 3: Rainfall Recorded in Pastures and Ranges - Al Hasakeh (2020-2021)⁵



As illustrated in Figure 4, most study respondents described water availability as fairly available or not available in the 2021 season, while for the 2020 season most respondents considered water to be available. The study respondents who reported water as not available were mainly from Al-Hasakeh, Tal Tamer, Yaroubia and Karama sub-districts. The reasons were attributed to the low rainfall levels, and disruption in Alouk water station. This latest disruption in Alouk station comes after months of reduced functionality, for reasons including reduced access for technical teams, an electrical fire in April 2021 at the Derbasiyeh electricity substation, which serves as the main source of electricity for water pumping at the station. Approximately 460,000 people in Al-Hasakeh Governorate rely on Alouk water station as their primary source of potable water, with an additional 500,000 people served by water trucking supplied from the station sources, including in six IDP camps.⁶ It is worth noting here that Tel Tamer subdistrict is located on Al-Khabur river, and Al-Karama subdistrict is located on the Euphrates River.

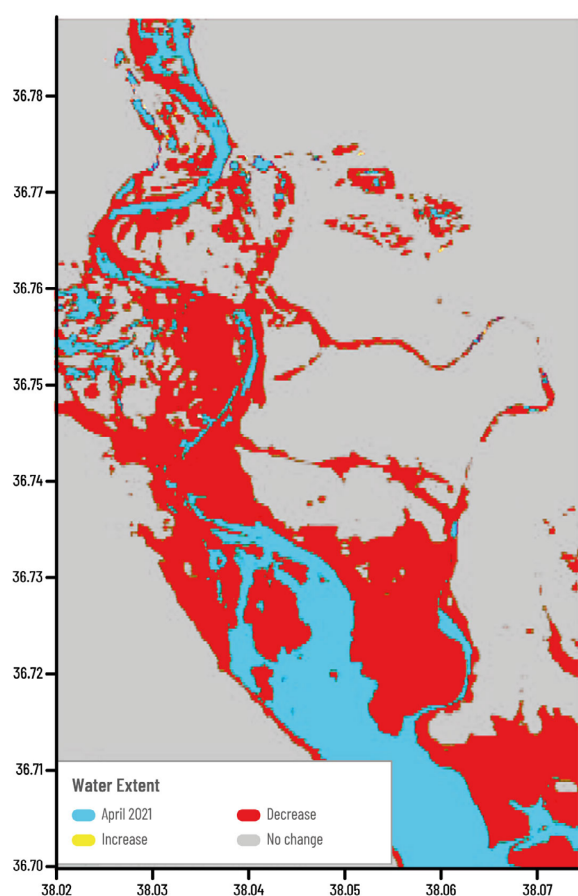
Figure 4: Reported Water Availability



⁵ WFP – VAM Seasonal Explorer, August 2021

⁶ OCHA. (July 2021). Syria: Alouk Water Station Flash Update: Disruption to Alouk Water Station. [Link](#)

Figure 5: Change in Euphrates water extent between December 2020 and April 2021⁷



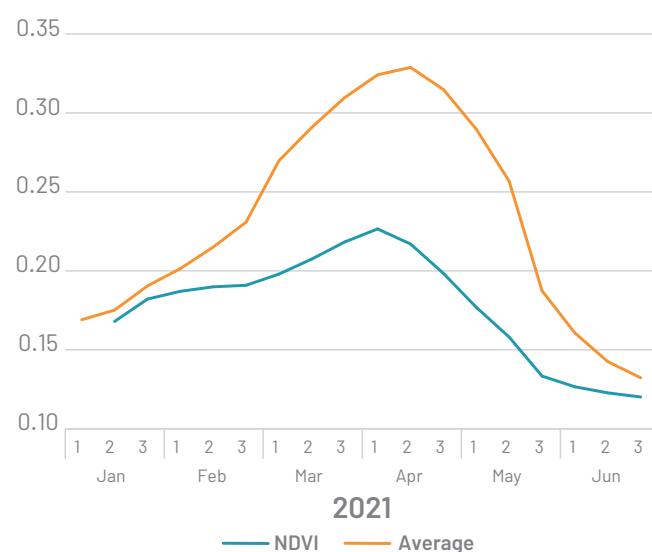
Surface water levels have been severely impacted by the low rainfall levels of the 2020-2021 winter season. The impact of the water scarcity issue was particularly evident amongst livestock producers living around the Euphrates River. The Euphrates' water flow at the Syrian border as controlled upstream by the Turkish dams' authorities should remain between 500-1,000 cubic meters per second for the downstream part of Syria but has been reduced to around 200-250 cubic meters per second since February 2021.⁸ Moreover, study respondents reported that the decrease of water levels in the Euphrates part in NES led to disruption in water stations and canals.

"There was no rain last winter, forcing producers to sell their livestock due to the lack of fodder, poor forage stands from pastures/ranges and rains are delayed this year as well, the livestock will disappear from the area"
- Livestock Producer, Quamishli, Al-Hasakeh

2.4. Availability of Green Pasture

The water scarcity issue in Syria had major implications on the pastures and rangeland forage available for livestock grazing. All study respondents reported that pastures and rangeland forage were either unavailable or fairly available (89% and 11% respondents respectively, n = 38) in the 2021 season. The Normalized Difference Vegetation Index (NDVI)⁹ which provides observation on live green vegetation further confirmed feedback received from study respondents. The recorded average NDVI of the first six months in 2021 is 24% less than the medium-term average of the same period. This is a proxy indicator of serious deterioration of forage cover for the year 2021 in NES.

Figure 6: Normalized Difference Vegetation Index (NDVI) Al-Hasakeh

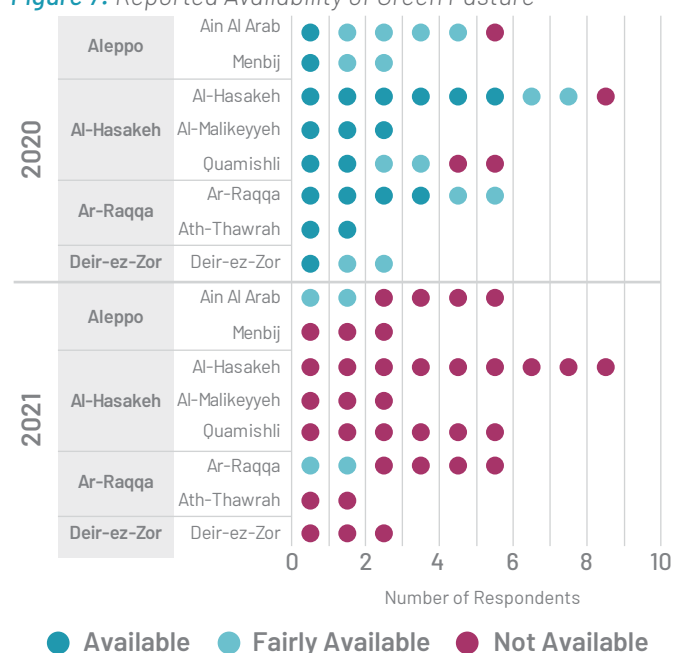


⁷ iMMAP. (2021, May). Northeast Syria Crop Monitoring and Food Security Situation Update: Impact of low rainfall and other crop stressors on winter crops - iMMAP Data Cube. [Link](#)

⁸ iMMAP. (2021, May). Northeast Syria Crop Monitoring and Food Security Situation Update: Impact of low rainfall and other crop stressors on winter crops - iMMAP Data Cube. [Link](#)

⁹ WFP - VAM Seasonal Explorer, August 2021

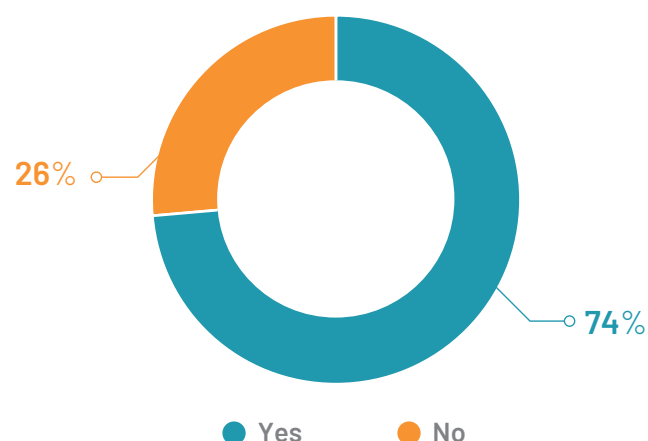
Figure 7: Reported Availability of Green Pasture



Fire incidents are another major issue that jeopardizes pastures and rangeland forage cover. Seventy-four percent of study respondents (28 out of 38 respondents) reported witnessing pre-harvest and post-harvest crop fire incidents in the last year. The reported incidents mainly took place in June and May of 2020, and three reported witnessing fire incidents in June 2021.

The absence of green pasture is an alarming indicator that has a direct effect on the survival and production of livestock. Scarce forage and water due to drought can result in the concentration of livestock around the limited water resources and trigger localized overgrazing which causes degradation of pastures and rangelands. Reportedly livestock producers were depending more on processed animal feed. Farmers adopted a range of coping strategies to adapt to the scarcity of green pasture, as some reached an extreme level of selling their livestock at lower prices. Others reported storing a large quantity of feed to complement the diet of their livestock during springtime, or substitute animal feed with vegetable crop, green residuals and leftover bread.

Figure 8: Percentage of Respondents who Witnessed Fire Incidents in 2020 and 2021

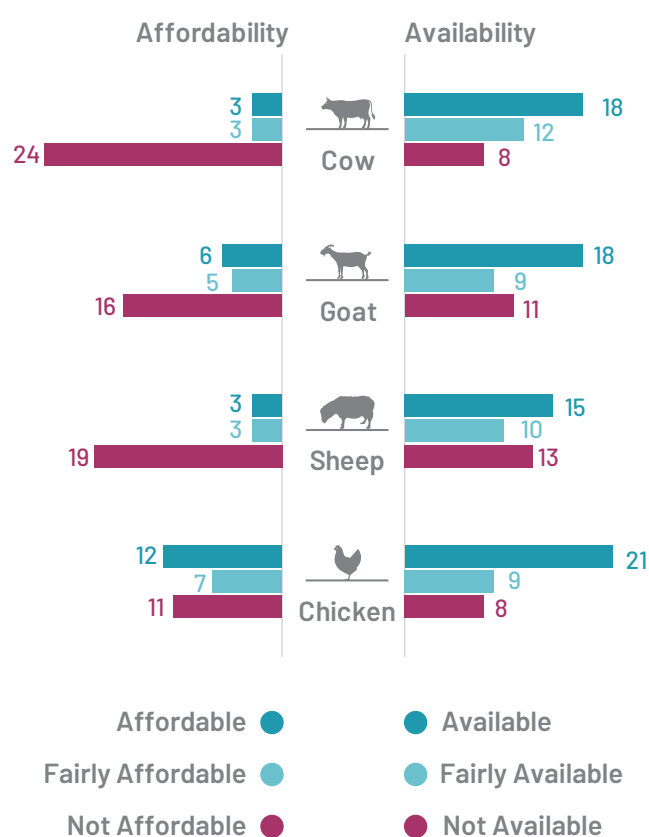


3. Livestock Market Infrastructure in Northeast

3.1. Availability of Animal Feed and Green Fodder

Processed and mixed animal feed is the primary substitute for green pasture and fodder, and farmers tend to consume and store more animal feed during dry seasons. The natural market reaction was to increase the prices of animal feed as a result of the increase in demand. Most study respondents reported that animal feed products for the different types of animals were either not affordable or fairly affordable (figure 9), despite a high number of respondents reported that animal feed was relatively available. There were two types of animal feed mostly available in the market, namely locally processed animal feed/fodder and imported animal feed/fodder. The drought and decrease in the local production of animal feed/fodder raw materials, i.e., barley and corn, has increased dependency on imported livestock feed/fodder products. However, imported livestock feed/fodder remain relatively expensive compared to local production.

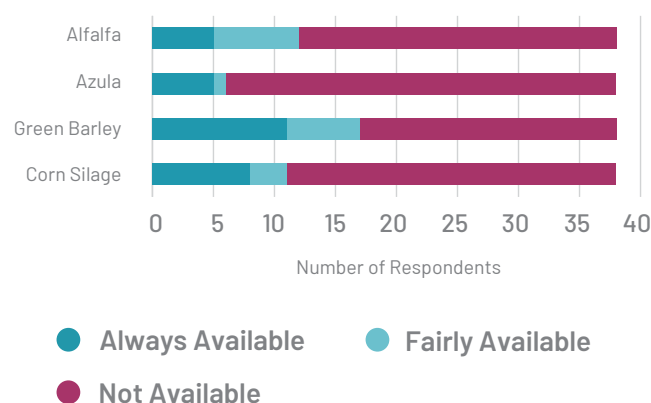
Figure 9: Affordability and Availability of Animal Feed



The Agriculture Community Development Company (ACDC) and the EAC have a system in place that provides subsidized animal feed/fodder to livestock producers. The allocated amount of subsidized animal feed/fodder is determined based on the number of livestock per household or producer. However, ACDC's animal feed/fodder distribution does not reach all livestock producers, and EAC's database needs to be updated as the last headcount survey was conducted in 2018. Implying newly returnees and IDPs are left out of this support based on an outdated beneficiary database developed in 2018. ACDC usually conducts six rounds of animal feed/fodder distribution to registered farmers, meaning a total of six rounds per year. However, according to recent observations by NES FSL cluster members, the first round of distribution for 2021 had not been completed by the time of data collection (July 2021). This indicates the level of animal feed and fodder scarcity the NES region is facing.

The production of crops that are used as raw materials for producing green fodder is considered mostly not available (Figure 10). A few study respondents considered some of the green fodder crops available specifically in Al-Hasakeh, Ar-Raqqqa, Menbij and Deir-ez-Zor districts. The most common green fodder crop that is being produced locally is green barley. Water scarcity, poor production of green fodder crops in NES, and the increase in agriculture input prices were the reported reasons linked to the limited availability of green fodder.

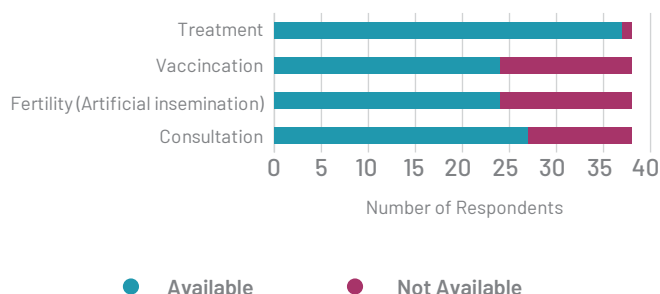
Figure 10: Availability of Green Fodder Crops



3.2. Veterinary Services

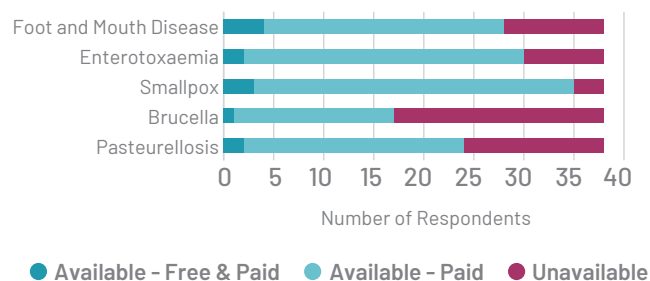
General treatment (medical diagnosis and medical prescription) is considered widely available in northeast Syria, however, more specialized services such as artificial insemination are not considered as available. EAC plays a role in providing free veterinary services, medicine, and vaccines to registered livestock producers. However, livestock producers depend more on the private sector for the provision of such services, as the EAC does not have the capacity to widely cover the majority of livestock producers.

Figure 11: Available Veterinary Services



Immunization against the most common livestock diseases in the region is an essential risk mitigation practice against any potential outbreaks, namely, Pasteurellosis, Brucella, Smallpox, Enterotoxaemia, and Foot and Mouth disease. EAC conducts annual vaccination campaigns, however, the out-reach of such campaigns is limited, and livestock producers may have to pay in order to get their livestock vaccinated (see figure 12).

Figure 12: Reported Available Vaccines



Livestock Market Systems Map - NES

August 2021

The Market Environment

Institutions, rules, norms & trends



SYP
Depreciation



Economic and Agricultural
Commission Support



Agriculture Community
Development Company



Quality
control



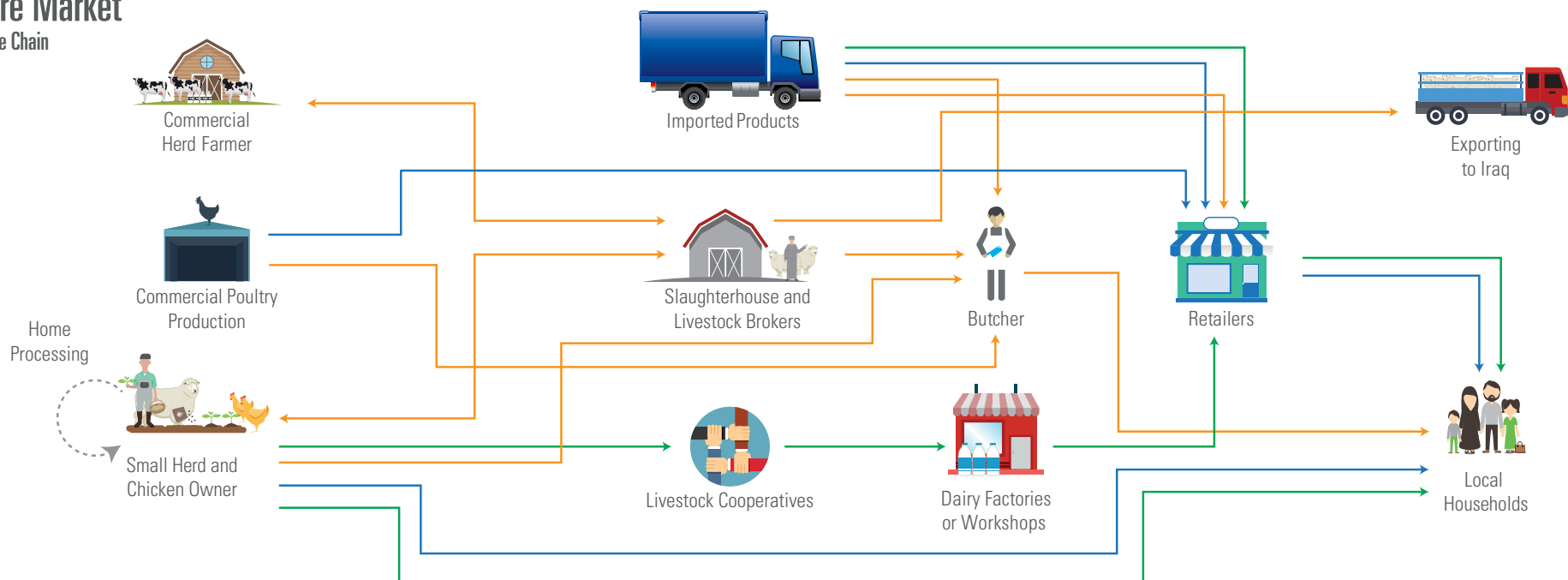
Climate
Events



Exchange Rate
Volatility

Core Market

Value Chain



Key Infrastructure

inputs, market-support services



Availability of
Green Pasture



Veterinary Services



Subsidized Services
and Inputs



Animal Feed
Production



Water
Scarcity



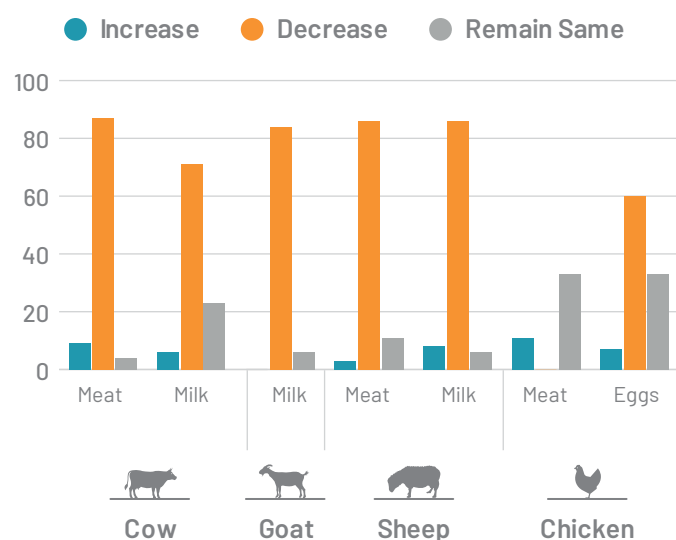
Expensive Vaccines
and medications.

4. Livestock Core Market

4.1. Production

An estimated 40% of households rely on crop or livestock activities to make a living. The estimated number of livestock per household as per study respondents ranges between 1 – 3 for cattle producers, 2–50 for sheep and goat herders, and 2 – 75 for chicken growers. Most study respondents expected that the livestock count per household will decrease in the next six months, if the shortage in green forage and increase in animal feed/fodder prices continue. The combination of the hyperinflation in animal feed/fodder prices and SYP exchange rates, in addition to the severe implications of the water scarcity issue which is forcing farmers to sell their livestock at lower prices. As for the few respondents who expected to witness an increase in livestock counts, the reported reason was linked to the fact that September and October are the peak reproductive season for most ruminants in NES.

Figure 13: Expected Change of Livestock Count per HH in the Upcoming Six Months



“Processed animal feed/fodder is generally unavailable in the region because of its high prices, and livestock producers tend to sell their livestock or raise as few of them as possible due to the costs linked to raising livestock, and the inability to provide livestock feed/fodder or forage and water, as well as vaccines” – Vet in Ain Al-Arab, Aleppo

The reproduction of livestock is usually managed so that birth occurs during springtime as green pasture and vegetative forage stimulates milk production. Accordingly, since the sheep and goat gestation period are around five months, the breeding season for sheep and goat is in October and November. As for cows, the gestation period lasts for nine months, therefore, breeding or insemination occurs late spring or early summer. However, the ready-to-mate growth rate for most livestock types had decreased in the 2020-2021 season compared to the previous season due to limited access to animal feed/fodder caused by the increase in animal feed/fodder prices and extreme reduction in forage cover across pastures and rangelands. Study respondents expected this trend to remain for the 2021-2022 season, specifically with the constant increase in animal feed/fodder prices. The average ready-to-mate (calving/kidding) per year for goat and sheep is twice a year, however, it is expected to be reduced to one per year.

4.2. Trade

A natural market reaction to a dramatic increase in animal feed/fodder prices, and drought is a reduction in live animal prices. This is a result of producers' inability to sustain growing their livestock and providing them with adequate nutritional and medical needs, where they lean towards selling their animals as a coping strategy mechanism. This creates an increase in supply of livestock units and/or products which naturally decreases their prices in the market. This study recorded similar trends in prices of live animals as of June 2020 compared to June 2021 prices. Figure 15 provides the ranges and averages reported prices by study respondents. This trend was further validated from WFP VAM prices, where Figure 14 shows how prices of livestock types started dropping from March 2021 onwards. WFP VAM prices, where Figure 14 shows how prices of livestock types started dropping from March 2021 onwards.

Figure 14: Monthly Average Price (SYP) of Live Lamb (two-year-old-male)⁹

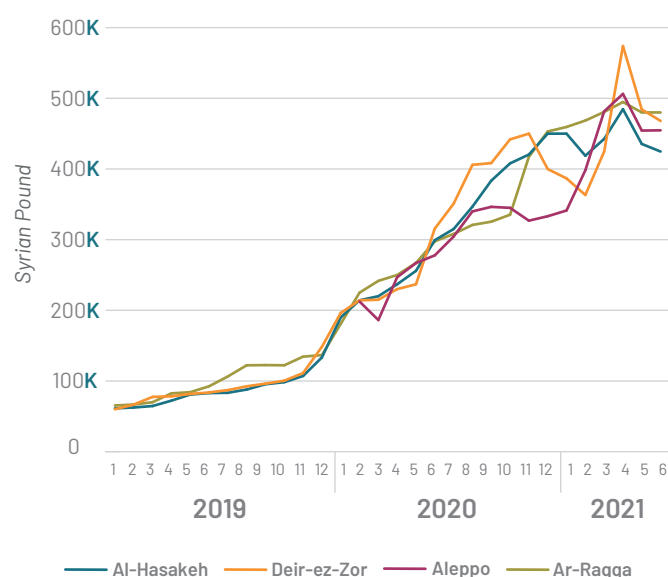
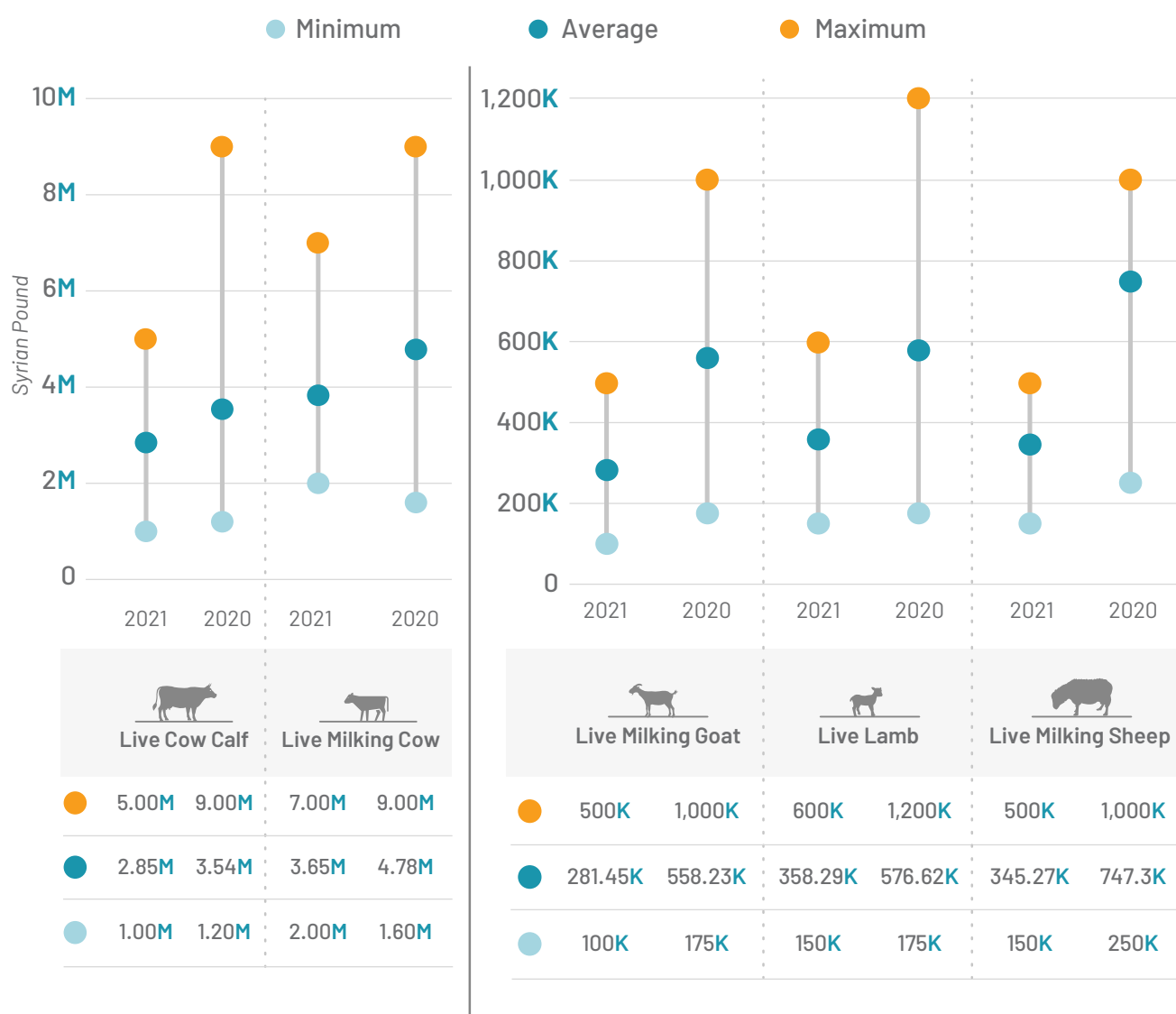


Figure 15: Reported Prices (SYP/Animal Head) of Live Animals in NES



4.3. Livestock Meat and Dairy Products

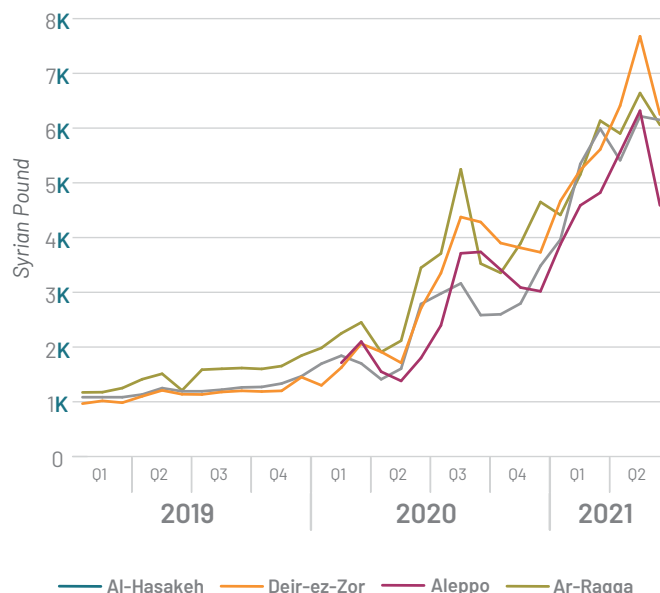
Meat Products

The local meat products are more dominant in the market compared to imported products. Slaughterhouses and butchers buy animals ready for slaughter from local producers. However, a few study respondents reported the availability of imported meat products in the market which are sourced from Government of Syria (GoS) areas, Iraq, Iran, and Turkey. Figure 16 provides a price summary of the different meat products as reported by study respondents. There was a slight decrease in the average prices of lamb and beef in June 2021 as compared to June 2020. This can be attributed to the increase in the supply of live animals considered for slaughtering as a result of the drought and increase in animal feed/fodder prices. As for poultry meat, the average meat prices increased in 2021 compared to 2020, though according to WFP VAM data the price of meat dropped with notable fluctuation in prices in June 2021.

Figure 16: Reported Prices (SYP/KG) of Local Meat Products in NES



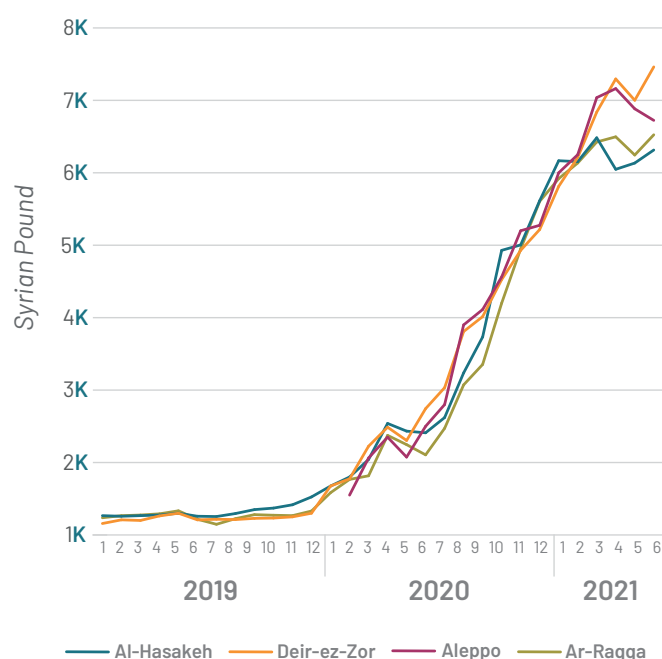
Figure 17: Monthly Average Price per Governorate - Meat (Chicken, Plucked in KG)



Dairy Products

Processing of local milk to dairy products takes place on two levels: at the household level where the herd owner processes the milk and sells the dairy products for cash, and at the commercial level in dairy workshops. The prices of milk defer based on the type of ruminant, where sheep and goat milk recorded higher prices. This could be attributed to the seasonality of milk production during springtime for those two animals. The reported average prices of all milk products in 2021 were higher compared to 2020. The trend remained the same after transferring the prices to USD using the average market exchange rate of the reporting period. With excluding the effect of the currency despeciation, increase in milk prices can be associated with the rise in animal feed prices and limited availability of green pasture. The same applies to egg prices which remained on the rise since late 2019.

Figure 18: Monthly Average Price per Governorate - Eggs(30 PCs)



Imported dairy products and eggs were reportedly found in the market but not at the same level as local products. People tend to trust local dairy products specifically goat and sheep products. Chicken and eggs are the most common imported products in the market, which were reportedly sourced from the Government of Syria (GoS) controlled areas, Government of Turkey (GoT) controlled areas, and Iraq. Few study participants reported the availability of imported beef and sheep meat and dairy products, specifically in the Al-Malikeyyeh, Al-Hasakeh, Ar-Raqqa, and Quamishli districts.

Figure 19: Reported Prices of Local Dairy Products in NES (SYP/KG)



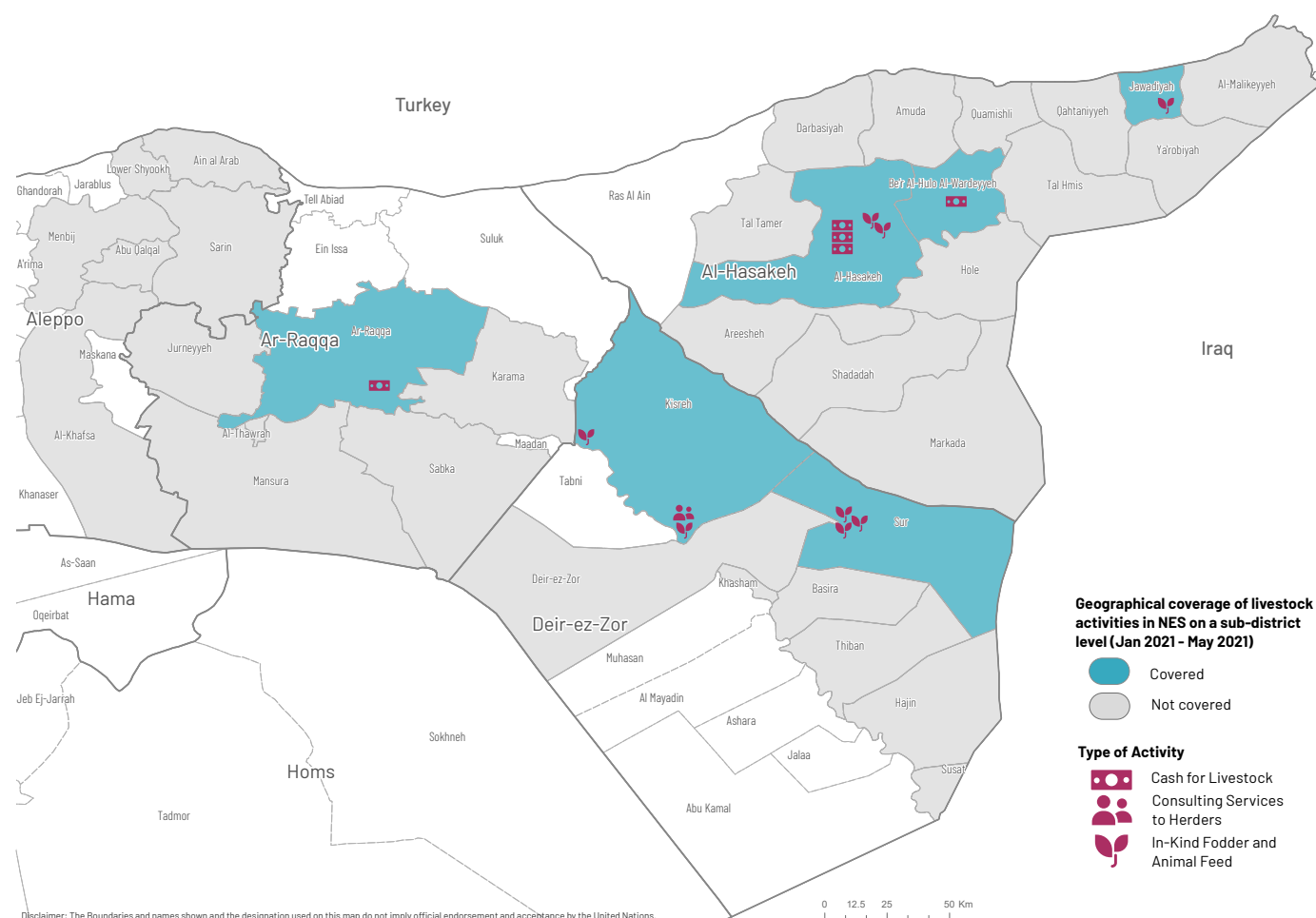
5. Discussion and Recommendations

This rapid assessment has shed the light on several existing problems that are significantly impacting livestock production in NES. **According to the Livestock Emergency Guidelines and Standards (LEGS), a drought is considered a slow onset emergency to the livelihood of livestock producers, yet the ongoing economic and political instability in NES added complexity to the drought inflicted emergency.** This drought has been forcing a gradual increasing stress on livelihood over the past months and will continue to have these forces until an emergency is declared. Drought has four main stages: alert, alarm, emergency, and recovery. Livestock condition and production gradually worsen during alert and alarm phases, due to the reduced access to feed/fodder, forage and water sources; leading to a decline in livestock market value, increase in grain prices, and worsening of human food security. **The findings of this study clearly articulated that the livestock producers in NES are living in the alert and alarm phases of a drought emergency.**

The economic and political instability have added an extra layer of complexity as a result of disruptions in access to livestock production services, and the limited accessibility of supported services from the NES Economic and Agriculture Commission. Most study respondents reported that livestock production inputs (water, animal feed and green fodder) were either unavailable or slightly available when compared to the previous season. **This has made some farmers reach an extreme coping strategy level of selling their livestock for lower prices.** The reported average prices of live animal head were notably lower compared to last season, whereas milk and egg prices remained on the rise as the production cost and inputs price of these products increased.

Despite the urgency of the livestock situation in NES, according to the most recent five Ws data (who, what, when, where, and why) from the NES Food Security Cluster, there were four organizations implementing activities related to livestock production support between January and May 2021. Map 2 illustrates the geographical coverage and the type of livestock production activities. The most dominant activity was the in-kind distribution of animal feed, followed by cash for livestock, and one organization reported providing consultation services to sheepherders on animal health improvement practices.

Figure 20: 2 Livestock Activities in NES (Jan-May 2021) – FSL Cluster 5Ws



Clearly there are funding gaps for livestock based-livelihood activities in NES. The provision of animal feed/fodder tackles one aspect of the market system which might have an immediate to medium-term impact but does not address the root cause of the disruption in animal feed/fodder production. There is a need for a holistic intervention plan to address the different components of the livestock market system, considering the drought emergency and the economic crisis.

Taking livelihood perspective in emergency response highlights the need to develop close links between relief, recovery and development, considering emergency preparedness and post-emergency rehabilitation. The following Participatory Response Identification Matrix (PRIM) provides a set of recommended activities. These recommendations aim to respond to the current drought emergency situation and pave the way for a long-term recovery plan for sustainable livestock production in NES.

5.1. Participatory Response Identification Matrix

		Livelihoods Objectives			Drought and Economic Emergency		
Technical Options	Intervention	Provide intermediate benefits to crisis-affected communities using existing livestock resources	Rebuild key livestock-related assets among crisis-affected communities	Protect the key livestock-related assets of crisis-affected communities	Immediate aftermath	Early recovery	Recovery
Veterinary Services	Free veterinary services to communities that have limited access to veterinary services and are not being reached by EAC (this can include medication, treatments, and vaccines)	●	●		→		
	Build the capacities and train local veterinary professional workers and the Economic and Agricultural Commission. Veterinary professional workers. Usually, these workers are paid at rates lower than professional service providers and are recruited from the community. This could improve the accessibility and availability of general treatments in remote areas.		●	●		→	
Feed/fodder Support	Conduct emergency feeding programs by distributing animal feed/fodder to the most affected communities. This may include sourcing feed/fodder externally that cannot be provided from local sources during the emergency phase.	●	●		→		
	Support the production of animal feed/fodder raw materials, i.e., barley, wheat, and soya beans. This is to reduce the effects of dependency on imported animal feed/fodder products.			●	→		
Drought Response Strategies	<p>To minimize the immediate loss of livestock due to the increasing frequency of drought the following strategies can be adopted as an immediate response:</p> <ul style="list-style-type: none"> • Early localized in-depth assessment of the situation and decision making • Good and external pest disease control • Disposal of less productive stock and saving money for re-stocking or to buy feed supplements • Wean calves early, eve at three months old • Use of crop residues, conserved feed/fodder or purchased feed sparingly 	●			→		
Water	Water trucking can be adopted during the first stages, as it is considered expensive, resource-inefficient, and labor intensive. However, due to the critical nature of the impact of dehydration on livestock, it can be the only option in certain cases.	●			→		
	Rehabilitation of current water infrastructure and water harvesting facilities.		●	●		→	
Provision of Livestock	Replace or provide livestock assets to smallholder farmers. The aim of this intervention is to revitalize the lost and sacrificed animals in the last two years as a result of the drought and economic crisis. This intervention is proposed at the recovery phase after the drought (when the environment is conducive for restocking).			●		→	
Scoring against LEGS livelihoods objectives		<p>● Very positive impact on objective</p> <p>● Good impact on objective</p> <p>● Some impact on objective</p> <p>● Small impact on objective</p> <p>● Very little impact on objective</p>			<p>Emergency Phases</p> <p>→ Appropriate timing for the intervention</p>		