# Market Environment Assessment

# TAJIKISTAN

**Rasht Valley, Khatlon & Faizobod, GBAO**

December 2016

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World Food Programme

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# 1. Executive Summary

Tajikistan is a food-deficit country and the poorest in the Commonwealth of Independent State. Poverty headcount ratio at national level was recorded at the rate of 31.3 percent in 2015 (World Bank, The World Bank in Tajikistan: Country Snapshot, 2016). According to WFP's Food Security Monitoring System (FSMS), the severity of food insecurity in the country had been alleviated since its independence from the Soviet Union, but the recent economic contraction in the Russia Federation has hit the economy of Tajikistan, as it heavily relies on remittances.

The World Food Programme in Tajikistan has recently launched its Country Programme (CP) 2016-2020, which focuses on institutional capacity building, social protection and resilience building of communities in fragile ecosystem, while maintaining the capacity to respond to emergencies. In line with WFP new Strategic Plan 2017-2021, WFP Tajikistan Country Office has embarked into the Integrated Road Map to launch an Interim Country Strategic Plan (ICSP) in 2018. In line with the CP and ICSP, WFP Tajikistan will introduce conditional and unconditional cash-based transfers (CBT) in its programme portfolio. As part of the preparatory process, the market environment assessment was conducted in November 2016 in the areas most vulnerable to food insecurity and natural shocks.

Due to its high dependency on remittances, Tajikistan has a cash-based economy. Food availability and access are thus highly interlinked to market indicators. The market prices in country have been highly stable and well-integrated with Dushanbe functioning as the main hub of the supply chain in country. Nevertheless, the market prices in GBAO tend to be higher than Rasht Valley and Khatlon & Faizobod mainly due to relatively lower food self-sufficiency level and the high transportation costs. During the assessment mission, all the district markets in the targeted districts were found well-functioning. Cash-based transfers, whether in the form of cash or vouchers, are a concrete and feasible option to support the most vulnerable living in the targeted areas. Nevertheless, further assessment on the supply chain is required to confirm the feasibility of cash-based transfers.

The market in Tajikistan is demand and supply driven. Most of the districts have at least one District Central Market (DCM) which is accessible every day or six days a week and has various food items on display. Many DCMs are government owned or partly government owned, with Tajikistan government also playing a monitoring role for the food prices, and organizing monthly food exhibitions or fairs for the farmers in order to stabilize the market. According to interviewed key informants, in the case of emergency, the market is also able to meet the increased demand in a short period of time – within a week on average.

In this assessment, the mission also focused on farmers, their challenges and their needs. Farmers faced the effects of climate change which has been damaging their produces. They expressed their interest in receiving further information on market prices and early warning information via mobile phones to be better connected to markets and adequately supply the markets to meet the its demand.

# 2. Acknowledgements

This report is based on the findings of the market environment assessment that was conducted in November 2016 in Tajikistan.

The publication of this report was possible thanks to the collaborative work with Tajikistan government and the people who participated in the assessment. Hence, WFP would like to extend its gratitude and acknowledgement to all contributing partners and their staff for their support and cooperation. The results of this collaboration are presented in this report.

Special thanks also go to different teams in Tajikistan Country Office and Sub-Offices, WFP Regional Bureau in Cairo and WFP headquarters in Italy for the tremendous support for this publication.

Finally, WFP wish to express gratitude to all the interviewed traders, key informants and farmers for their time and frank attitude to discussing the market situation in the region.

For any feedback, clarification or comments, please contact any of the following people:

**Mr. Paolo Mattei**
*Country Director and Representative*
World Food Programme
Tajikistan Country Office
paolo.mattei@wfp.org

**Mr. Andrea Berardo**
*Head of Programme*
World Food Programme
Tajikistan Country Office
andrea.berardo@wfp.org

**Ms. Heejin Kim**
*VAM Officer*
World Food Programme
Tajikistan Country Office
heejin.kim@wfp.org

**Mr. Erkin Huseinov**
*VAM Officer*
World Food Programme
Tajikistan Country Office
erkin.huseinov@wfp.org

**Mr. Filippo Minozzi**
*Regional Programme Policy Officer / VAM*
World Food Programme
Regional Bureau in Cairo (RBC)
filippo.minozzi@wfp.org

# 3. Objectives & Methodology

The Market Environment Assessment is part of the inter-sectorial feasibility assessment conducted by WFP to determine which transfer modality is the most adequate for the beneficiaries, taking into considerations several indicators, including, among others nutritional values, supply chain and market functionality, financial and IT sectors capacity. WFP Tajikistan CO is indeed planning to implement CBT programme starting from 2017.

The main question that the assessment aims at answering is if the markets in the targeted areas (mostly mountainous areas subject to supply chain disruption linked to natural disasters) are functional and can absorb an increased demand and respond to market shocks due, among other, to natural hazards. It also aims at understanding possible secondary impacts of the injection of cash in the economy. At the same time the study wants to identify possible challenges and opportunities linked to the introduction of cash based transfers for both beneficiaries and the local economy. Finally, the Market Environment Assessment is looking at farmers and what the main constrains to connect them to markets and improve their wellbeing are.

In order to answer to the study questions, the assessment mission analyzed price trends, market integration, food availability and access, capacity to respond to increased demand, and capacity to absorb market shocks due to, among other, natural disasters. Ultimately, it analyzes the challenges farmers face in accessing markets and improving the agricultural production.

The Market Environment Assessment was conducted during the first three weeks of November 2016 and covered three regions of the country, identified as priority intervention areas for WFP. The assessment was carried out with three mission, one per region, by staff from WFP Tajikistan CO and Sub-Offices (SOs) with field support from experts from the WFP Regional Bureau in Cairo (RBC). In preparation to the assessment a deep literature review was undertaken and questionnaires designed. During the assessment, WFP staff interviewed 44 randomly selected traders, 28 key informants (including heads of market, agricultural department representatives and other supply chain actors) and conducted 13 focus group discussions with farmer associations. The data collected during the assessment were triangulated and complemented with the use of secondary data from previous WFP assessments and other studies/reports produced by relevant stakeholders, including the Government of Tajikistan.

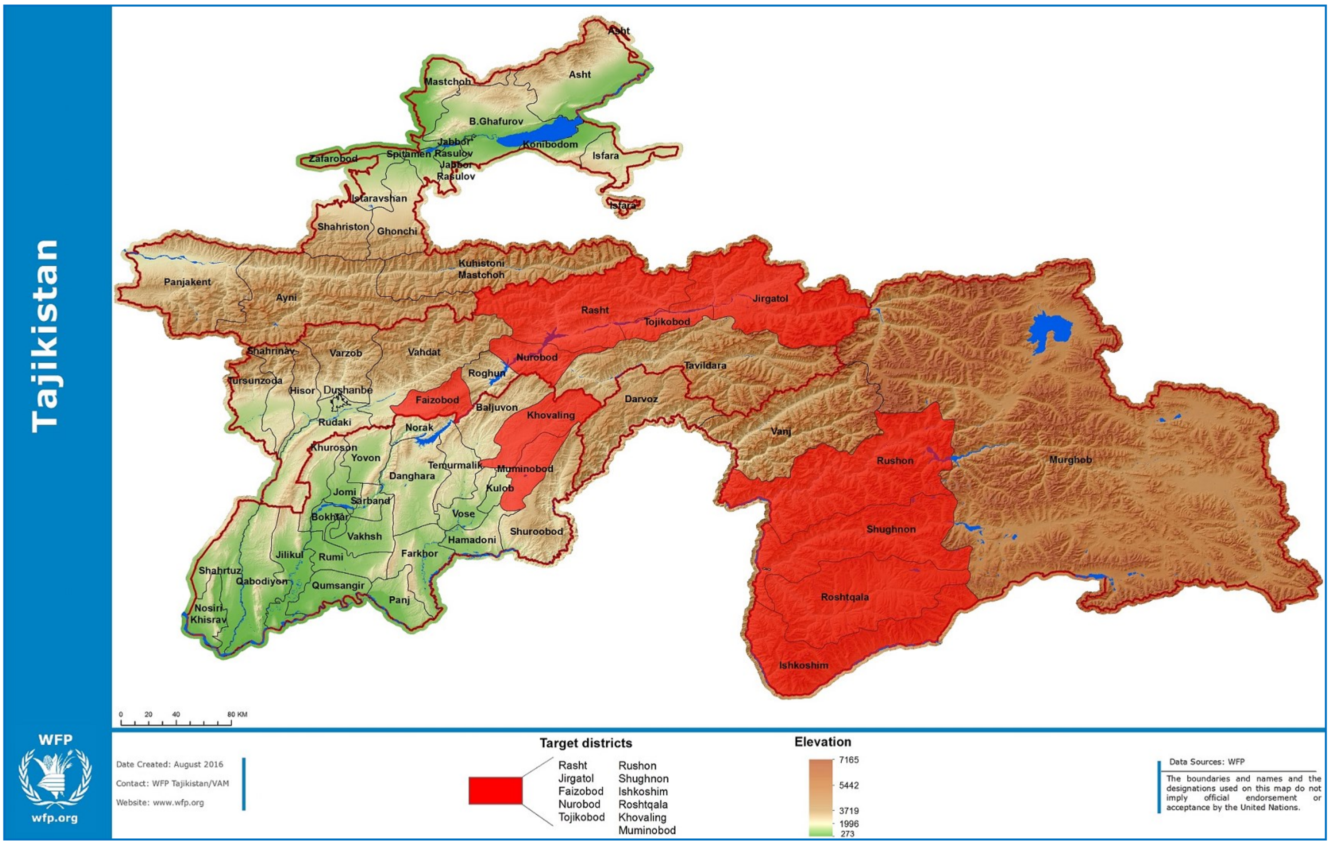
The assessment missions conducted semi-structured interviews to key informants. These include representatives from the local Agricultural Department, Head of Markets, retailers, wholesalers, truck and minivan owners, and other relevant actors in the markets. For each district center the District Central Market (DCM) was assessed, along with randomly selected retailers and traders. In addition, a randomly selected representation of retailers and middlemen in both remote and close-by *jamoats* markets was interviewed. Furthermore in each district the head of market, representatives from the Agricultural Department and from farmers associations were interviewed. Finally, some traders were interviewed on their route from one market to the other.

The interviews in the assessment were conducted with semi-structured questionnaires for traders, enriched by specific open questions asked to different key informants depending on their role and involvement in the market. In addition some Focus Group Discussions were organized with farmers associations, market representatives and traders. The questionnaires used as reference during the assessment are in Annex D.1, D.2, and D.3. The assessment mission used Open Data Kit (ODK) software for computerized interviews as well as paper questionnaires to conduct the assessment.

The selection of the targeted areas was based on the findings of two main studies: (1) Review of Climate Risks and Food Security in Tajikistan: National Profile and Adaptation Priorities, and (2) 2015 Integrated Context Analysis (ICA).

The review of Climate Risks and Food Security in Tajikistan was carried out to address and explore the socio-economic vulnerability context and main challenges posed for food security as a result of climate change and related disasters. The ICA is instead a combination of historical trend analyses and complementary data and information on: food security, nutrition trends, and historical exposure and risk to natural shocks including flood, drought, and mudflow. By overlaying different variables on maps, the ICA identifies and locates vulnerable areas.

**Map 1: Market assessment geographical focus**



# 4. Country and WFP Operation Background

Tajikistan is a landlocked, food deficit country with a population of eight million. The country is mountainous with 7 percent of the total land suitable for farming. Approximately 74 percent of the population resides in rural areas, and about 55 percent of the labor force is employed in the agricultural sector (Ilyasov, Götz, Akramov, Dorosh, & Glauben, 2016).

According to the 2016 Global Hunger Index (GHI) analysis and FAO statistics, Tajikistan tops malnutrition among the former Soviet republics, and 33.2 percent of Tajikistan's population is suffering from undernourishment (Von Grebmer, et al., 2016). Acute and chronic malnutrition appears to be a matter of concern among the surveyed children in the WFP Food Security Monitoring System (FSMS) in May 2016, of which over 6.4 percent of children under-5 were wasted, 13.3 percent underweight and 30.4 percent stunted. The severity of the situation for the surveyed children is classified as "poor" in term of acute malnutrition (wasting) and "serious" in terms of chronic malnutrition (stunting), based on the World Health Organization (WHO) standards (WFP, 2016).

Tajikistan is also a highly remittances dependent country, with remittances constitution almost 45 percent of Gross Domestic Product, mostly of which originated from Russian Federation. Economic downturn in Russia reduced the number of work opportunities for Tajik migrants (Stepanyan, Roitman, Minasyan, & Epstein, 2015). Consequently, devaluation of the Russian Ruble has contributed to the significant reduction of amount of money remitted. According to the most recent FSMS report, (WFP, 2016) the decline in remittances has significantly impacted the wellbeing of rural populations, whose situation and coping mechanisms which might have been already affected by chronic food insecurity and recurrent natural disasters.

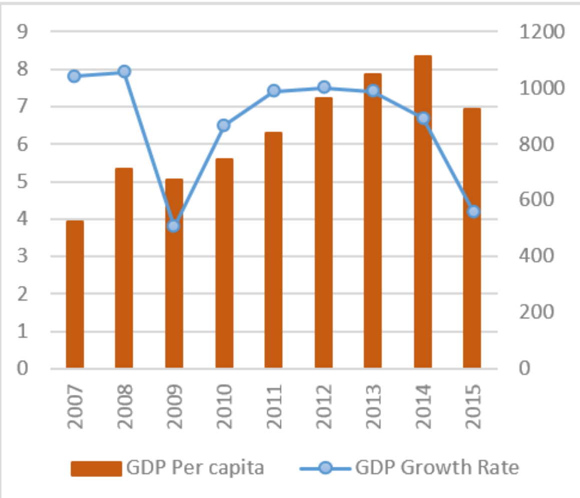
WFP has been present in country since 1993 when it provided life-saving assistance during the civil war. Over the time its programme phase gradually shifted from emergency response to protracted recovery/relief and development programmes. In April 2016, WFP launched a five year Country Programme (2016-2020) with focus on institutional capacity building, social protection and resilience building of communities in fragile ecosystem, while maintaining the capacity to respond to emergencies. As recommended by the PRRO 200122 evaluation and following the feasibility studies carried out by WFP Regional Bureau in Cairo (RBC) and Headquarters, from January 2017, the Country Office is exploring possibilities to provide cash based transfers as part of its programme portfolio.

As part of the transfer modality selection for the CBT Programme, WFP conducted a market environment assessment in November 2016, which evaluates the functioning of food markets, including food price trends, their regional integration, supply chains, capacity to respond to an increase in demand, the availability and quality of the food accessible at reasonable and stable prices, and the opportunities for beneficiaries to access them safely.

# 5. Macro and Meso-Economic Indicators

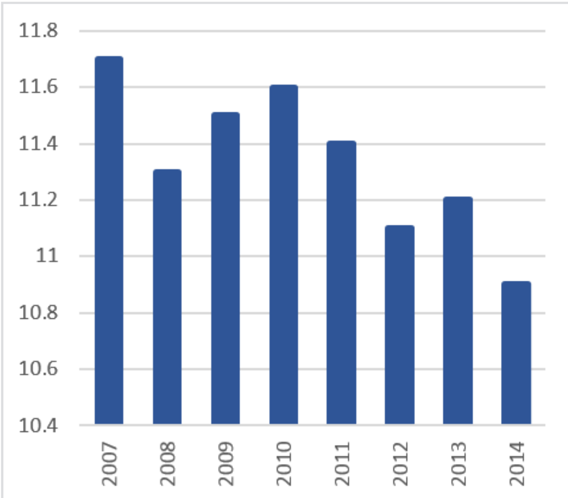
Tajikistan was classified as low-income country, but recently re-classified as lower-middle income country with a GNI per capita (Atlas method) of 1,350 USD and of 1,240 USD, respectively in 2014 and 2015. The GDP per capita has gradually increased in trend despite the contraction starting from 2014. The figure reached its peak at 1,113 USD in 2014 and 925 USD in 2015 (World Bank, World Bank Data, 2016) [Chart 1]. The recent contraction is due to an economic downturn in the Russian Federation and Tajikistan's dependency on it. As a result, the GDP growth rate that had recovered from the 2009 international financial crisis, has decreased since 2013. The economic forecasts for Central Asian countries done by the Asian Development Bank foresee a 4 percent growth of the GDP in 2017 (Asia Development Bank, 2016). The poverty rate was recorded at 31.3 percent in 2015 (World Bank, The World Bank in Tajikistan: Country Snapshot, 2016).

**Chart 1: GDP per capita and GDP Growth Rate in Trend**




*(World Bank, World Bank Data, 2016)*

**Chart 2: Unemployment Rate in Trend**



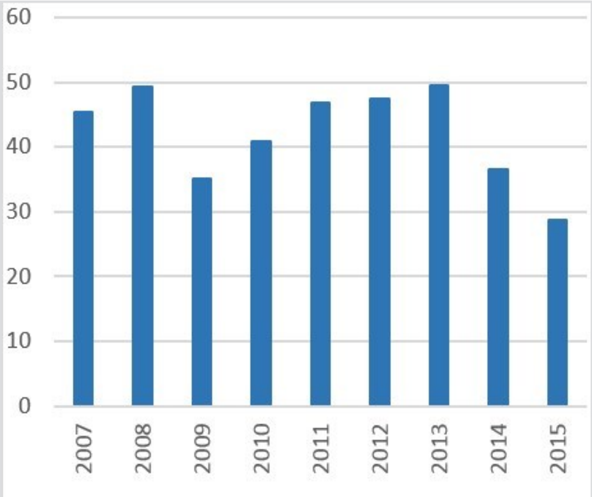

*(World Bank, World Bank Data, 2016)*

Personal remittances (received, % of GDP) gradually increased to 49% in 2014, and declined to 20% in 2015. Also, unemployment rate has slightly declined in trend: 11.7 percent in 2007, 11.1 percent in 2013, and 10.9 percent in 2014 (World Bank, World Bank Data, 2016). The value of the USD in Tajik Somoni rose and has remained at the peak since February 2016. The May 2016 WFP FSMS reports depreciation of the Tajik Somoni (TJS) against the US Dollar (20.5 percent decrease between May 2015 and May 2016).

The value of the Russian Ruble had steadily increased until February 2016, but has decreased until June 2016, even though the figure still remains higher compared to the previous year (National Bank of Tajikistan, 2016). The depreciation of the Ruble has led to the loss of opportunities for migrants and the consequent reduction of remittances.

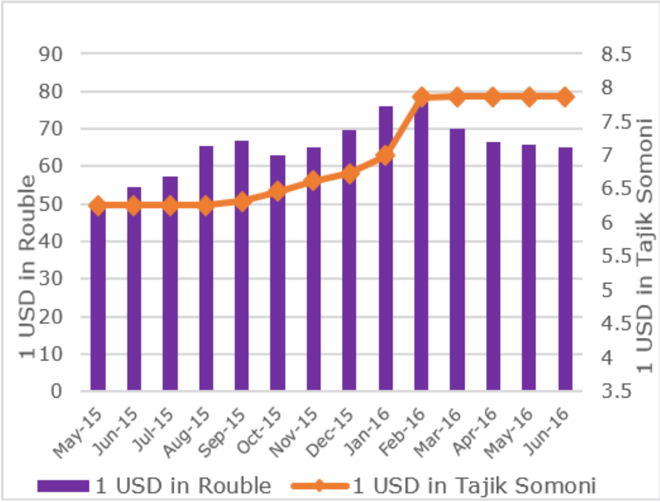
This trend has been reported to be a challenge, particularly among poorer households that depend on migrant labor. The percentage of food insecure households that rely on remittances as primary income source has significantly increased in the last round of FSMS, conducted in May 2016 (WFP, 2016).

**Chart 3: GDP Share of Personal Remittances Received (in %)**



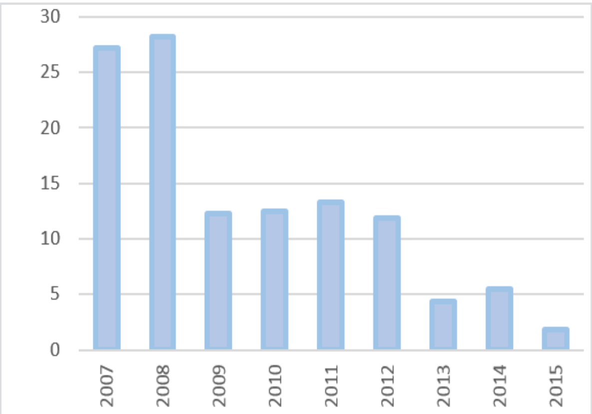

*(World Bank, World Bank Data, 2016)*

**Chart 4: Exchange Rates of Russian Ruble and Tajik Somoni**




*(National Bank of Tajikistan, 2016)*

**Chart 5: GDP Share of Personal Remittances Received (in %)**




According to World Bank data, the inflation rate in Tajikistan has strongly decreased from 2007 to 2015, as it was recorded at 5.4 and 1.8, respectively in 2014 and 2015 (World Bank, World Bank Data, 2016). On the other hand, the inflation rate during the first semester of 2016 has increased and reported at 5.5 percent (National Bank of Tajikistan, 2016).

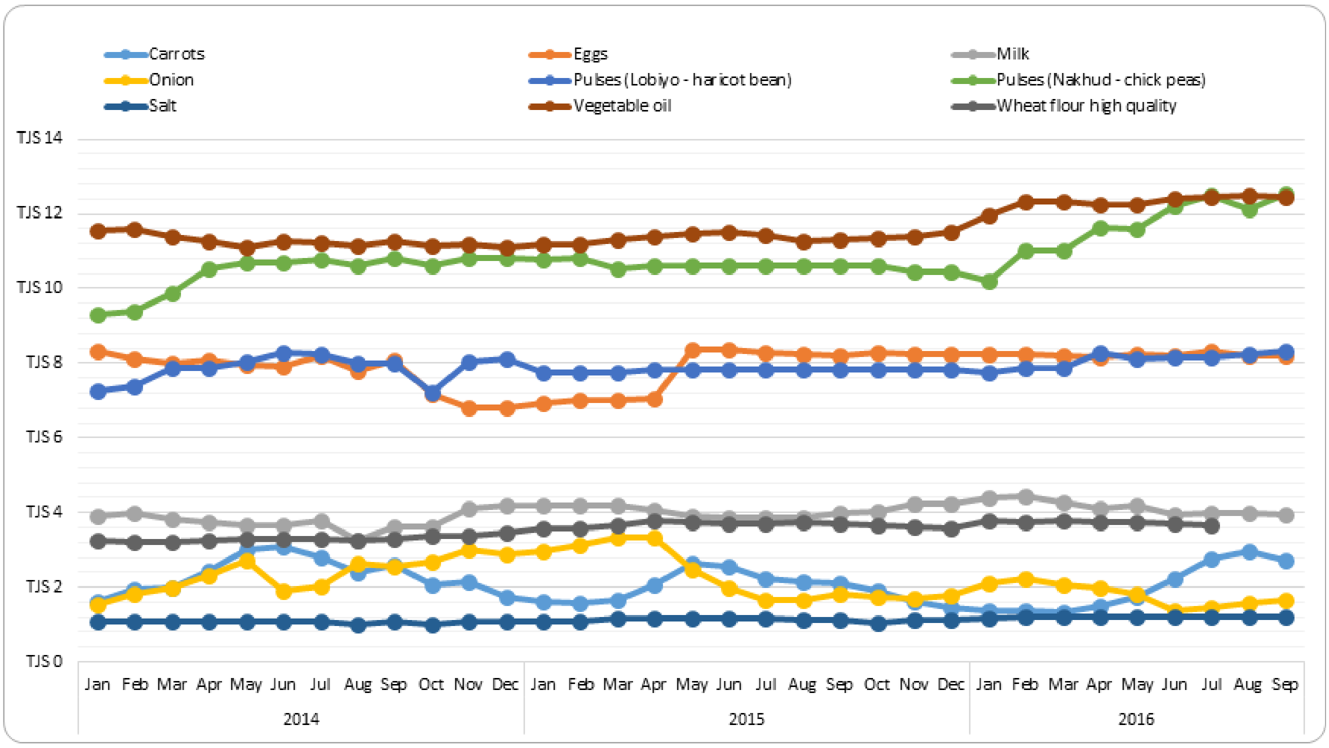
*(World Bank, World Bank Data, 2016)*

Wheat is the single most important staple commodity in country, while potatoes and rice are leading alternative staples. Wheat provides about 52 percent of per capita daily caloric intake and constitutes more than 57 percent of protein intake and 23 percent of fat intake per day (Food and Agriculture Organization, 2016). Wheat imports account for more than 50 per cent of cereal consumption in Tajikistan. The country meets its domestic wheat requirements mostly through intra-regional trade with Pakistan and Kazakhstan.

According to the Tajik Government, around 1,392 thousand tons of cereals were harvested in 2013, and the figure decreased to 1,170 thousand tons in 2015. The harvest of potatoes was 1,116 thousand tons in 2013, 1,318 tons in 2014 and 1,170 tons in 2015. The production was reported not only in the crop production, but also in the livestock production: 86.5 thousand tons of meat was produced in 2013 and it decreased to 58.7 thousand tons in 2015 (Statistical Agency, 2015).

According to WFP price monitoring data, food prices have been relatively stable in the past years and well integrated, with Dushanbe as the main hub of the supply chain, as depicted in Graph 6 and Table 2. This has been also confirmed in recent researches. According to Ilyasov et al, the prices of Tajik wheat are co-integrated with regional and international wheat prices, and amongst each other. In the long run, one percentage change in price in an independent market price brings about 0.96 percentage change in a dependent market. This figure is equivalent to an average long-run price transmission, coefficient prevailing within European wheat markets at 0.94 (Ilyasov, Götz, Akramov, Dorosh, & Glauben, 2016).

**Chart 6: Food Commodity Price Trends 2014-2016**



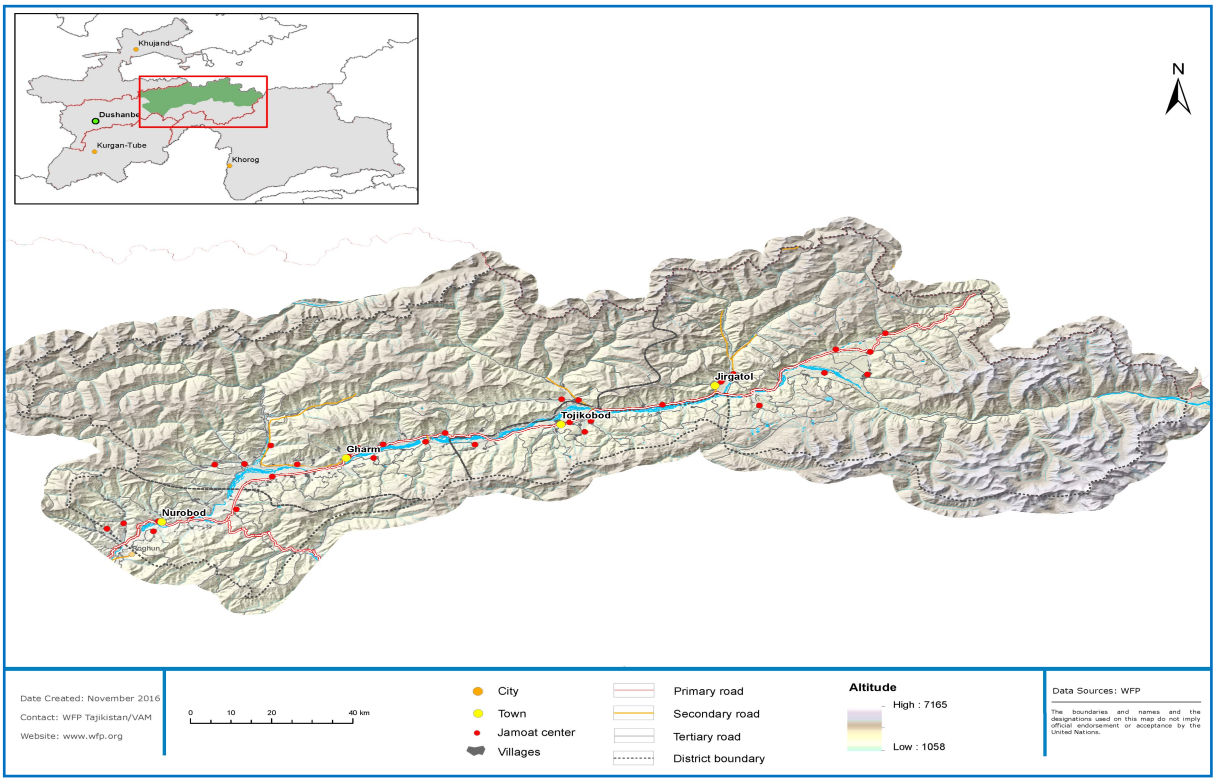
# 6. Markets Findings

## Description of the Area

**The target area is classified into three areas: (1) Rasht Valley, (2) Khatlon & Faizobod and (3) Gorno-Badakshan Autonomous Region (GBAO). Rasht valley area includes Nurobod, Rahst, Tojikobod and Laksh. The second focus area is Khatlon & Faizobod. These districts in this area are located on the western side of the country – Muminobod, Khovaling and Faizobod. In the last focus area, GBAO, Rushon, Ishkasim, Roshtkala and Shughnon were explored in the assessment.**

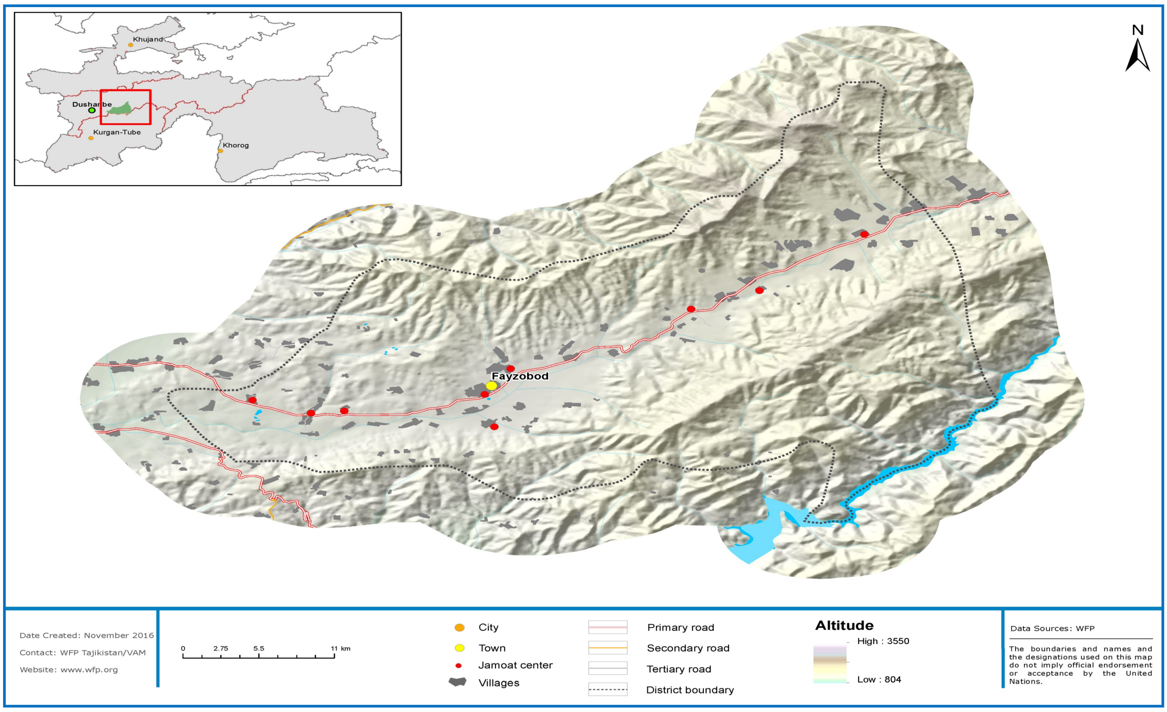
**Rasht Valley**: The Rasht Valley is a long and narrow valley that extends from Roghun to the border with the Kyrgyz Republic, in the upper-center of Tajikistan. Coming from Dushanbe, the street is paved until Roghun while there are some road disruptions (approximately 30km) between Roghun and Nurobod. **Nurobod** was the first district visited as part of the assessment and consists of 7 *jamoats* (sub-districts). From Nurobod, a main paved road in very good conditions passes through Rasht, which is the main city in the Rasht Valley and consists of 14 *jamoats*. Tojikobod used to be a *jamoat* of Rasht until approximately 20 years ago and is now a district consisting of 5 *jamoats*. Finally Laksh (formally Jirgatol) is the last district before the border with Kyrgyzstan and has 10 *jamoats*. All four districts lay on the same road that cuts the valley. Bridges and minor roads conduce to *jamoats* and villages. Nevertheless most of the population of Rasht Valley live close to the main road and even remote villages are generally well-connected and served by infrastructure.

**Map 2: Map of target districts in Rasht Valley**

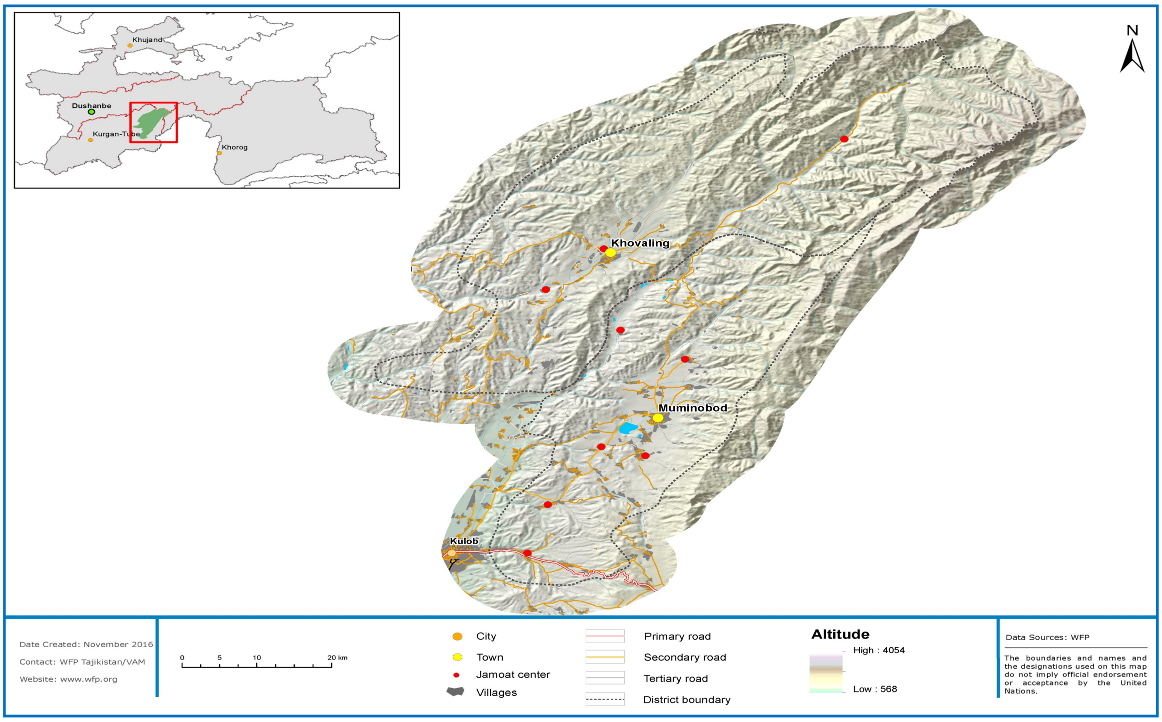


**Khatlon & Faizobod:** Faizobod is a district located about 120 km from Dushanbe, or one hour and a half by car. The assessment team could witness the vibrant atmosphere in the District Centre Market (DCM) with traders coming and selling the market. The route to/from Dushanbe is well-paved and the district is further connected to Roghun and to Rasht. On the other hand, the route from Dushanbe to Muminobod and Khovaling passes through Kurgan Tyube and Kulob, two main urban areas in Tajikistan. All routes are well-paved and able to facilitate logistics delivery even under heavy snow.

**Map 3: Map of Faizobod**

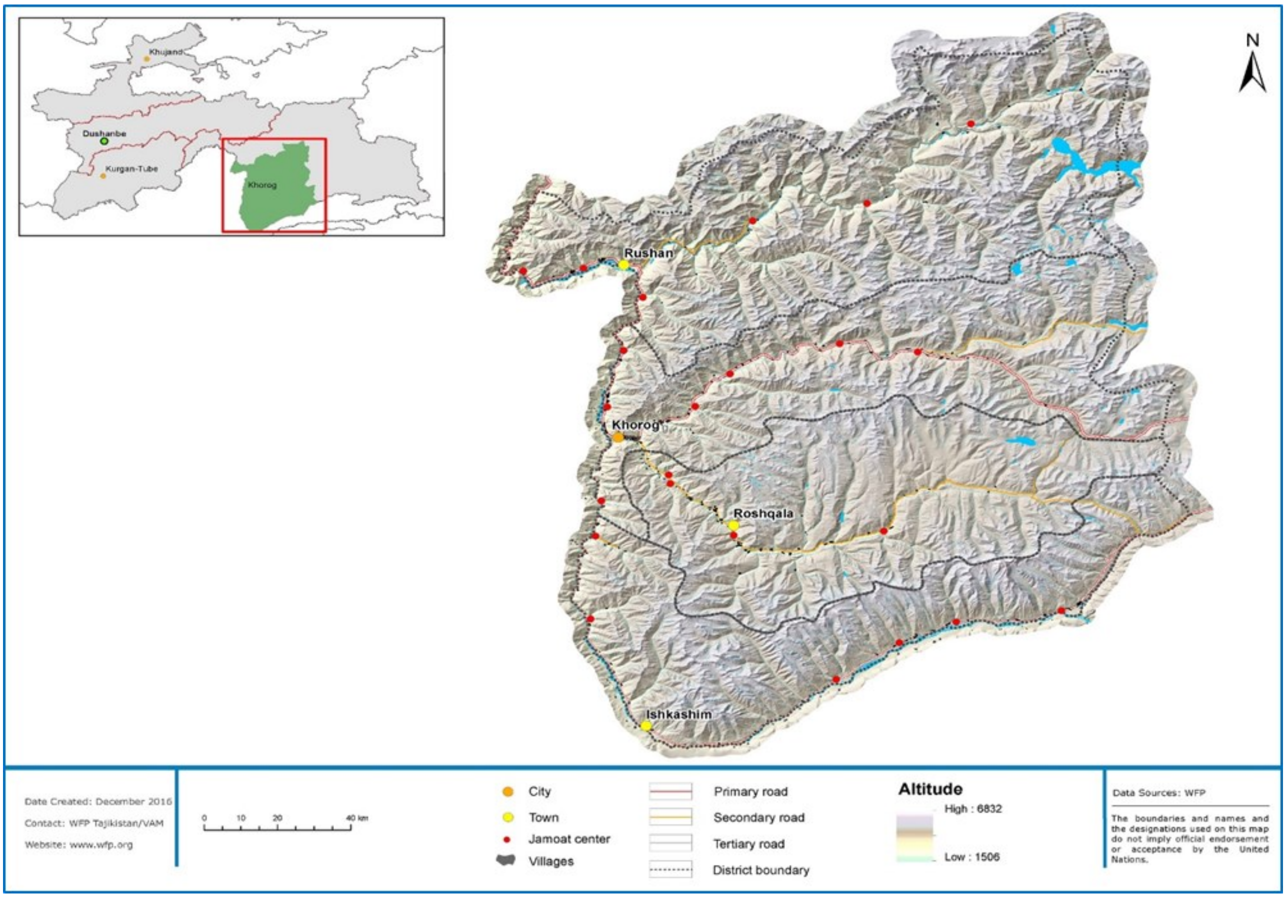



**Map 4: Map of Muminobod and Khovaling**



The last region is **GBAO**, in particular four districts, namely Rushon, Ishkasim, Roshtkala and Shughnon. The area borders with Afghanistan and only the river Panj divides the Tajik Badakhshan from the Afghan Badakhshan. The main road from Dushanbe to Darvoz (Khatlon) is in a good condition, while the rest (240 km) is not served properly. All four district centers are located along the main road and close to Tajik-Afghan border. Moreover, there are three additional cross-border markets in Badakhshan. All cross-border markets are not functioning since the government decided to close them due to security issues with Afghanistan. The cross-border markets used to be open once a week and stimulated the local traders by selling food to Afghans. Rushon has 7 *jamoats* and two main valleys Bartang and Rushon. Ishkoshim has 7 *jamoats*, where 4 of them are located next to the central town of the district. The majority of the population are living along the main road and all villages are well connected, being not far from the road. The distance from Khorog to the center of Ishkoshim is 110 km and the road condition is relatively good. Roshtkala has 6 *jamoats* and it is the district in GBAO not sharing a border with Afghanistan. Shughnon has 7 jamoats, which surround Khorog, the main city of GBAO.

**Map 5: Map of target districts in GBAO**



## Market System

> **Most of the districts have at least one District Central Market (DCM), main hub of the supply chain in the district and open every day or six days a week. Livestock markets are generally open during the weekend or one or two days during the week depending on the district.**
>
> **To note, many of the DCMs are government owned or partly government owned. Tajikistan government also plays a monitoring role for the food prices, and organizes monthly food exhibition or fair for the farmers in order to stabilize the market.**

**Rasht Valley**: The DCM of Nurobod, along with the district center is planned to be moved 3km away by April 2017 due to the construction of a new dam that will otherwise flood the full area. As of now, Pum Bochi is acting as the district central market (DCM) with over 10 retailers. The district central market working every day and a livestock market working only once a week.

While the DCM is regulated and well organized, the livestock market is causal and pastoralists and traders attend as needed. In the DCM of Nurobod both traders (retailers/wholesalers) and farmers sell their products, there is nevertheless a difference in their contract and regulations. Traders indeed usually have a fix area in the market and they have a rental contract with the head of market (HoM), while farmers pay a fee upon appearance. Small traders also pay only when coming to sell products.

In Rasht, there are two main markets for fresh produce, including the DCM. The DCM is open 7 days a week, and accessed by villagers from neighboring districts as well. Every Friday the local authorities organize an exhibition with farmers coming from *jamoats* to try to lower prices of food. Within 1 km from the DCM lays a private market where truckers display their food items and sell. Most of the products on display are fresh vegetables and fruits. Nevertheless, they are come-and-go sellers, not regular ones. In addition, a livestock market at regional level is open once a week.

The district central market is divided into two sections: food section and non-food section, and it seems that shops seem to be arranged and placed by food items in the market. The district market are open 6 days a week, and shop owners have the access to the electricity most of the time. Interviewed butchers report that they have 70 square meter sized warehouse and on average received more than 100 customers in the past week from. Even with the shock, they expect to receive similar number of clients.

Usually wholesalers and retailers rent their place in the DCM, which is by default an open space and it’s managed by the government which appoints the HoM who is in charge of monitoring and managing all issue related to the market, making sure things run smoothly. In Rasht people who sell in the market are always the same and pay rent/fee for their shop.

In Tojikobod, in the past there were no formal markets but since 2000 the government created the district central market which opens every day. There are also some markets (e.g. livestock) that works on a less frequent basis, normally once or twice a week. The DCM is getting bigger and bigger, and in the suborn area there are more and more shops. In Tojikobod area, as in any other district of the Valley, each *jamoat* has indeed its own shops or markets.

In Laksh there is one DCM which, unlike other districts in the region, is not owned nor controlled by the government. Apart from the DCM, other big markets are organized on weekly basis (usually on Sunday) for livestock and mainly involving regional traders for other food commodities. There are over ten shops inside the market and a few sellers on the road. During the assessment, many of road sellers identified themselves as retailers and were witnessed with their stocks alongside a minivan or truck.

**Khatlon & Faizobod**: In Faizobod, there are two main markets: the DCM in the district center and Miskinobod market in the northern area. In addition, KIs informed that farmers have taken initiatives to form own groups to sell in farmers' corner. The local authority seems to support the new grass-root movement and make it as a model for other districts. Even so, 50 per cent of the farmers' corners are only seasonally operated. Also, food items in the farmers' corner are reported lower than that of DCM.

In Muminobod, there are one DCM and two big local markets. According to KIs, market is accessible for everyone including farmers. However, due to the economic difficulties or lack of cash, not everybody can come purchase the products. Food is usually sourced from the district, but also brought from Kurgan Tyube and Dushanbe.

In Khovaling, there are four main markets: one DCM, one livestock market, and two relatively big *jamoat* markets. The DCM is open every day throughout the year, and the livestock market is closely located to the DCM and open twice a week. The two *jamoat* markets (Lohuti and Zombak) are open once a week only.

**GBAO:** Rushon has one district central market working every day with small and medium sized shops. However, there are big shops in *jamoat* centers such as Barrushon. Only an exception might be the Bartang valley where small shops are still functioning, but with higher prices. The reason is the higher cost for transportation, where the road is not paved and frequently affected by landslides.

The DCM is well organized and most of the shops are private. Additionally there is one Tojikmatlubot[1] shop with fixed prices. Some traders-collectors met in the DCM are coming to market and selling products in the street from mini-vans and cars (mainly meat products). Approximately fifteen shops with diverse food and non-food items were observed. Most of the products are coming from Dushanbe, including fruits, potatoes

[1] Tajik Republican Union of Consumers' cooperation.

and meat, which are locally produced but not enough to be self-sufficient). Traders of the market have a good supply system from Dushanbe and Khorog with an informal agreement with big truck owners delivering goods to them.

There is one market in Ishkoshim, with small shops across the street and few medium sized shops selling food and NFIs. Also it is observed that some traders are selling vegetable products from minivans and meat from cars. Most of the retail shops are rented in the DCM. Apart from DCM there are 2-3 wholesalers in town, where local (mostly from *jamoat*) retailers buy food to resell it in their shops. Wholesalers sell at lower prices creating competition at retailer level. KIs reported that the district could produce only 50 percent of their own consumption except for potatoes, meat and fruits, which is exported to Khorog and other neighboring districts. In most cases the district traders have their own warehouses.

The local government was organizing exhibitions with lower food prices during the national festivities, when demand for food products usually higher compared to other days. However, KIs reported that the Agency for State Reserves is functioning poorly. During the assessment, WFP visited some shops belonging to State Reserves where main staple products like wheat flour, vegetable oil and pulses are supplied by the State Reserve Agency itself, while the rest of goods including NFIs are provided by the traders.

In Roshqala, the DCM looks more under stress with lower demand and also less developed, compared to other districts. There are small-sized shops surrounding the market area. The DCM is not owned by the government and all shops located in the market have been built by local traders. Although a diversity of the food is very limited in the shops, but almost all products can be found on the market. Apart from DCM there are few functioning wholesaler shops, in which traders from remote *jamoats* come to buy food items to sell in their shops. Regarding the distance, traders are spending additional cost for transportation and food prices are thus usually higher in the remote villages. The local government is organizing exhibitions during the national fests similarly to other districts.

There is no DCM in Shughnon and usually the local population buys food from Khorog DCM. The government of Shughnon is planning to build a local market shortly, but for the moment there only three shops in Vahdat town (Shughnon center) with similar prices. The distance from the district center to the Khorog DCM is only 15 km, and price for the public transport is around TJS 2-3 one way. The Khorog DCM is responding to Khorog demand along with neighboring districts. The Khorog DCM is divided into two parts with food production area and non-food items zone. Traders are selling vegetables from trucks, which are used by local traders as warehouses. The costumers are buying only vegetables and fruits from wholesalers and independent trucks. There are many shops and retailers inside the Khorog DCM, and the State Reserve Agency has its corner where it sells only wheat flour.

## Market Dynamics

**DCMs of all visited 11 districts appear to be very vibrant and animated with different food items on display during the assessment period – November 2016. Despite the winter seasonality, all markets were on operation. For the geographical locations and road connection (most of the road well-paved and connected), each DCMs experience various dynamics with different food supply routes, and they are well-interlinked to Dushanbe - the main hub of the supply chain. Nevertheless, GBAO area appears to have higher food prices than Rasht Valley and Khatlon & Faizobod mainly due to the transportation fees even though highly integrated with Dushanbe.**

**Rasht Valley**: Shops in the DCM are small-medium sized. On the display, diverse food items were witnessed: wheat flour, oil, vegetables, pulses, meat, milk, eggs, and tomato. Except potato, most of the food products come from local traders, and most of wheat flour is imported.

When asked who controls the market, KIs reported that the Nurobod market is influenced by retailers and storage companies for local products, while by traders for imported commodities. Other informants reported that farmers and retailers have a high influence in the DCM. Nevertheless the Head of Market sets price ceilings, especially for staple commodities (wheat, oil, meat). It is indeed the HoM who negotiates with traders (not the farmers) and then sets a ceiling on prices for retailers.

In Nurobod, WFP key informants reported that normal storage system in the district is to rent common silos (offered at the DCM) or store in farmer's private warehouses. To link farmers to markets, the Agriculture Dept. organizes monthly exhibitions of products to be sold to traders coming from/going to Dushanbe. Nevertheless people try to sell their produce (mostly potato) directly in Dushanbe or wait until April (lean season) to sell. The most important supply source in the district is own production, mostly purchased directly from farmers. The key informants (KIs) reported that there is usually no risk in supplying the district with food, neither local nor imported. However other KIs confirmed that farmers stock in their home for 4-6 months during winter time, and shops in the *jamoats* usually have 2 more months of reserves. In this period people usually don't go to the DCM. In Rasht the market is well functioning, roads and public transport are good and there are no main risks that affect the market. Floods sometimes hit the district and supply decrease with an impact on prices, but it is usually recovering quickly (within one week).

Rasht DCM appears to be the hub of the food supplies in the region with both wholesalers and retailers in presence, and is well connected to other neighboring districts in the area. Interviewees reported that they received customers afar from 60~70 km.

As aforementioned, apart from the DCM, there is another public market where traders' trucks open to the public. To avoid unfair competition with the DCM, when many trucks come to the district, the government organizes an exhibition. This normally happens on a monthly basis and also allow farmers and local traders to sell their products. For this reason the competition of traders does not constitute a problem for local people.

Tojikobod district central market is located in the district center and seemed vibrant with different types of sellers coming in. As observed in Rasht, sellers in contract (with certification name tag) and farmers without sellers were engaged in their sales activities at different rates.

In Tojikobod, DCM, sellers are of two main categories: traders, who have stable contracts with the HoM, and farmers themselves who pay a daily fee (5 TJS) to exhibit their produce on a casual basis. The market offers big warehouses where traders and farmers can store food and other NFIs (10 warehouses of 500sqm each). For traders there is a long procedure to obtain the license to sell in the market, including medical tests and other quality checks on their products, while for farmers there are no restrictions. When asked why only few farmers come sell in the DCM, the HoM reported that 80% of farmers produce for themselves only. The market works for six days a week. Outside the market, many trucks and independent vans come mainly from Dushanbe and Kyrgyzstan to exhibit and sell products every day. This has a positive impact on prices and availability of products. Given the variety of sources, the HoM does not interfere with prices and leaves the market define them. The DCM tends to trade and sell mostly imported food, while smaller market and shops deal with local supply. In addition there is an open space for farmers to sell.

In order to assess the market environment in the rural area, the assessment team also visited shops in Shirinchashma village in the mountainous area. A few small sized shops were found in the village, and there was not much vegetable nor meat on display, mostly because local farmers rely on own production. Also, most of the items on display came from Dushanbe or local traders. The shop owner also explained that villagers often buy necessary food items from neighbors with cash. In the remote villages around Tojikobod area there is thus relative high competition at retailer level. People from *jamoats* and villages in the area also come to the DCM either by taxi or minivan.

Prices in Laksh are considered to be low compared to Dushanbe and in general both the DCM and the several shops in the district are well functioning. According to interview respondents there are no many layers in the supply chain as one main wholesaler usually buys from the source. Given the connection with main cities, Laksh area does not rely much on neighbor districts in the region.

After the central market, the mission visited a village near the border with Kyrgyzstan. Despite the distance from the district central market, the size of the main shop was big and well supplied with diverse food items, including wheat and fresh vegetables. The traders responded that they are able to meet the increased demand within a week in the case of a 100% increase, and that the geographical coverage of shops is around 50 km. There are 2-3 traders with large shops in the *jamoat*. Given that even shop in the rural area near the border is well equipped and meet the demand of the clients, the markets in Laksh seem to be well functioning.

In Rasht Valley, prices were relatively lower than those of Dushanbe apart from pulses. Some KIs claimed that the demand decrease due to the recent economic contraction along with cheap imported goods have lowered the prices. When prices are compared between DCMs and rural areas, food commodities were found to be relatively cheaper in the rural area.

The government is monitoring all prices in the country and tries to fill the gaps in the market at national level by providing deficit zones with food from surplus areas and better coordinate the production. Usually it is the HoM who is asked to supply other areas in the country by the central government. Market integration is thus incentivized.

Given the price difference from product to product and the existence/availability of substitutes, it was found that households prefer to buy cotton oil instead of vegetable oil, with an impact on the nutritional values. Similarly wheat flour is not fortified and the one mostly consumed is the local (if/when available) or the first grade. Pulses, given the high cost, are not very common in the diet of the population in the Rasht Valley.

**Khatlon & Faizobod:** Faizobod has mainly two supply sources: own production and wholesalers from other districts, Dushanbe in particular. The food commodities coming from other districts are mainly wheat flour and beans. The other way around, Faizobod delivers its fruits to Dushanbe and neighboring districts. In addition, there is an egg factory in the district where eggs are processed for sales and also sent out throughout the country, with the brand also found in Dushanbe. There is a warehouse in each market, but the utility fee depends on the type of the markets – private or public. The expense for the private warehouse is higher than that of public ones.

In Muminobod, the two most important supply sources are own production and from wholesalers from Kurgan Tyube, Kulob, and Dushanbe. Also, every Saturday and Sunday, wholesalers come to the district market but other times local traders go to Kyurgan Tube and Dushanbe. Market is mainly controlled by the demand but government plays a role of monitoring and also provides a monthly food exhibition to decrease the prices. It has also been noted that people from remote *jamoats* go to the district center or to Kurgan Tyube to buy food items and then re-sell them in their *jamoats*. The normal ways of storing food items are through private company storage and farmer's private warehouses.

According to the KIs in Khovaling, markets are well supplied with 30 percent of locally produced food and 70 percent of commodities from outside Khovaling. In the past, road condition was seasonally influencing the market, but as of now, roads are well paved and connected. Two important supply sources are own production and purchase from wholesaler from other governorates, mainly from Kurgan Tyube and Kulob. Vegetables are usually imported while fruits are seasonally exported to Sughd and to Russian

Federation. Market is controlled by the demand, but government plays a role to monitor the market prices and organizes food exhibitions.

In the region, locally produced products such as meat-mutton and beef and vegetables are relatively cheaper than in Dushanbe, but other products such as chicken, sugar, potato, cotton oil, haricot beans and eggs are slightly more expensive than in Dushanbe. With the good roads network between Faizobod and Dushanbe, the prices are quite similar, but in the cases of Muminobod and Khovaling, prices are slightly higher in the remote area, given the higher transportation costs and service fee.

**GBAO**: The key informants (KIs) in Rushon reported that the DCM is functioning properly, but for the moment the demand is relatively small and local people are storing their harvest. Most of the local products like fruits are cheap in the district and farmers are selling products in Khorog (64 km far from the district center). As main risks affecting the market in the district, KIs highlighted the poor road conditions and the low purchasing power of the local population. However, regional traders usually come to districts and sell imported products from the trucks, and they are bartering imported products with local products like apples, nuts, livestock etc. The governmental shop Tojikmatlubot, a semi-governmental agency, is functioning to stabilize prices for fuel, wheat flour, salt and vegetables, and mostly interfere with the regular functioning of the market by organizing exhibitions in times when the prices are going up or during the national festivities.

In Ishkoshim, market is functioning well and open at least six days a week. As the main risks, KIs indicated the road condition in some areas close to Darmorakht village. Here market supply is affected by avalanches during the winter time, but the recovery usually takes less than one week. The district central market covers the town and nearby villages, and densely populated *jamoats* (Zong and Vrang) have small markets with several shops. The district produces enough potatoes and meat for own consumption. Moreover, local farmers are selling potato seeds to the other districts (Shughnon, Murghob, Roshqala and Vanj). During the harvest season from September to January the local population relies on their production and traders sell both local and imported products (vegetables and fruits). The home production of vegetables is available in the district from October to March. Later in the year the cost of imported products usually increases due to lower supply in the area. However, the margin level for trader on imported products does not exceed 10-15 percent. According to the KIs, wheat flower price is anticipated to increase by 5 percent in the coming six months. KIs confirmed that there are 2-3 wholesalers in the district offering relatively lower prices, where resellers/traders from other neighboring *jamoats* are purchasing food to resell it in their villages.

According to KIs in Roshtqala, the DCM is functioning well and working every day. Wholesalers in the district have shops and providing relatively low prices for imported production. In general only 25 percent of sales in the shops come from local production, the rest is imported from other districts. Small farmers don’t have much surplus to sell in the market and store crop for the own consumption. The purchasing power of the local population is very small based on KIs and some shops in the villages were closed because of many debts accrued by the local population and low demand in the district. Also, KIs reported that low demand for meat production could be explained by seasonality, when livestock gains weight and farmers try to sell otherwise they would need additional resources to maintain and feed their livestock during the winter time. Meat price is comparatively small in the district, at TJS 26 due to the declining of the population's ability to pay (economic crises and less remittances from Russia).

KIs responded that most villages lay at high altitude (more than 3,500 meters above the sea level) and farmers can't produce more, with limited access to farmland. Local production is mostly used for their own consumption and the only valuable income source for the local population are the remittances received from migrants in Russia. Due to the crisis in Russia this has strongly affected the purchasing power of households in the area.

The CM of Khorog is well functioning, and market accessibility is good and *jamoats* of Shughnon and other districts in the region connected well and population in the region come to Khorog for shopping. KIs reported a high level of market integration, when the road is open. However retailers informed that road closure might last less than one week. The Khorog DCM is open every day and shops always have the access to electricity. Most of the retailers rent their place in the DCM, which is managed by the government. During the interview with retailers they reported that costumers come to market even from 80-100 km remote villages. The market would be able to absorb 50% of increased demand within one week. Generally, the main staple products allow for only 10-15 percent of the margin level, (up to 5-30 for imported vegetables), because of the long distance and risk to damage the cargo (decay) during the transportation.

The wholesalers in Khorog have a particular place with proper warehouses, where local retailers are getting products to sell in the market. KIs reported that wholesalers have mutual agreements with big traders in Dushanbe to supply wheat flour, vegetable oil, sugar etc. Also, big trucks are coming from other districts (out of GBAO) to sell food in Khorog town and some of them (logistics companies) on their way back, usually get construction materials and other NFI from the terminal Tang (China) to transport it to Dushanbe, to other districts and even to Afghanistan through the Jaykhun (formerly known as Qumsangir) district in Khatlon, Panji Poyon[2].

[2] Tajik-Afghan border checkpoint

**Table 1: Comparison of Average District Food Prices** ▲ Higher than Dushanbe ▼ Lower than Dushanbe

| Food Item | Rasht Valley | | Khatlon & Faizobod | | GBAO | | Price in Dushanbe (October 2016) |
|---|---|---|---|---|---|---|---|
| | Price | Change | Price | Change | Price | Change | Price |
| Meat-mutton | 27.75 | ▼ | 30.00 | ▼ | 29.45 | ▼ | 33.13 |
| Meat-beef | 28.57 | ▼ | 28.00 | ▼ | 28.15 | ▼ | 32.48 |
| Chicken | 13.20 | ▲ | 14.17 | ▲ | 16.32 | ▲ | 12.85 |
| Sugar | 7.06 | ▲ | 6.97 | ▲ | 8.17 | ▲ | 6.90 |
| Potato | 1.2 | ▼ | 1.83 | ▲ | 2.76 | ▲ | 1.80 |
| Cabbage | 2.13 | ▼ | 2.06 | ▼ | 2.80 | ▲ | 2.15 |
| Carrots | 1.46 | ▼ | 1.23 | ▼ | 2.81 | ▲ | 1.90 |
| Salt | 0.81 | ▼ | 0.82 | ▼ | 1.76 | ▲ | 1.00 |
| Rice | 7.54 | ▼ | 7.22 | ▼ | 9.10 | ▼ | 10.08 |
| Wheat flour high quality | 3.4 | ▼ | 3.36 | ▼ | 4.06 | ▲ | 3.58 |
| Wheat flour first grade | 3.08 | ▼ | 3.09 | ▼ | 3.46 | ▲ | 3.31 |
| Wheat flour local produce | 2.75 | ▼ | 2.66 | ▼ | 3.13 | ▲ | 2.80 |
| Vegetable oil | 10.84 | ▼ | 11.11 | ▼ | 13.62 | ▲ | 12.75 |
| Cotton oil | 9.63 | ▲ | 9.96 | ▲ | 12.67 | ▲ | 9.25 |
| Onion | 1.50 | ▼ | 1.27 | ▼ | 2.76 | ▲ | 1.64 |
| Pulses (haricot bean) | 9.67 | ▲ | 8.00 | ▲ | 10.10 | ▲ | 6.95 |
| Pulses (chick peas) | 10.71 | ▲ | 9.00 | ▼ | 8.83 | ▼ | 10.48 |
| Milk | 3.57 | ▼ | 2.80 | ▼ | 4.23 | ▼ | 4.88 |
| Eggs | 0.88 | ▲ | 0.92 | ▲ | 1.14 | ▲ | 0.86 |
| Tomato | 4.95 | - | 3.88 | - | 8.86 | - | - |
| No. of the food commodities at higher prices than Dushanbe | **6** | | **6** | | **14** | | **NA** |

## CHALLENGES

**Challenges affecting the market varies from lack of capital to natural shocks. The 11 districts visited during the assessment appear to have faced monetary challenges in increasing the supply chain despite slight difference among them. The lack of adequate own money for trading, limited/unstable demand and high food cost from the source were the top three constraints interviewed traders face. That might imply that an increase of the capital inflow into market may further facilitate the market dynamics possibly by an increased market demand. Also, to note, lack of transport means and poor road access was the fifth constraint/challenge for increasing the market supply, indicating an acceptable market integration even under harsh weather conditions.**

**Table 2: List of Top Constraints and Challenges for the Food Supply, By Region**

| Constraint/Challenge | Rank *(from the most reported challenge to the least)* | | | |
|---|---|---|---|---|
| | **Overall Target Areas** | **Rasht** | **Khatlon & Faizobod** | **GBAO** |
| Lack of adequate own money for trading | 1 | 2 | 1 | 1 |
| Limited/unstable demand | 2 | 2 | 2 | 4 |
| High food prices from the source | 3 | 5 | 3 | 2 |
| Low profit margin | 4 | 4 | 7 | 7 |
| Lack of credit / credit is too expensive | 5 | 5 | 8 | 5 |
| High transport costs | 5 | 12 | 4 | 2 |
| Poor infrastructure | 7 | 8 | 6 | 5 |
| High taxes and license fees (market tax/sales) tax) | 8 | 7 | 5 | 8 |
| Lack of storage | 9 | 1 | 11 | 11 |
| Lack of transport means and poor road access | 10 | 8 | 10 | 8 |
| Irregular supply including trade restrictions | 11 | 12 | 9 | 8 |
| High level of Insecurity | 12 | 8 | 12 | 12 |
| Few people are controlling the market | 13 | 11 | 12 | 13 |

**Rasht Valley**: Key informants in all districts visited confirmed that, if there is natural hazard hitting the area, the main impact would be on roads and infrastructures, but the normal recovery happens within 1-2 days and has only a temporary impact on prices. Prices seem to respond to demand and supply very elastically (both for increases and decreases).

The main risk, according to Nurobod Key Informants, is the lack of money and the difficulties accessing credit. In addition, roads can suffer disruption in winter and alter the supply. This usually lasts no more than 2-3 days. In extreme case, KIs reported that if there is a road blockage traders go from both side of the disruption and cross the obstacles in alternative ways (e.g. passing food by human chain, horses, etc.). This can affect both local and imported food supply chains. Other issues reported as critical are the presence of pest and the poor quality of land. In addition transportation costs are considered very high. Retailers also reported that lack of capital, high food prices from the source and low profit margin were the major constraints in the market supply, but if market demand increases up to 50%, it is feasible to meet the demand within a week; in the case of 100 % increase, retailers expect it to take approximately 2 weeks to bring the food items to sell.

In Rasht, KIs reported no issues with supply of food in the district, either imported or local. Rasht could supply the entire region, especially in regards to local produce (fruits, potatoes). In the DCM, amongst the main challenges, taxation and fees (e.g. shop rental) are considered one of the most crucial.

Due to the high international and national competition, according to key informants in Tojikobod, farming is becoming less and less convenient. The demand is decreasing and the high integration with Dushanbe (KIs reported that whatever is available in Dushanbe is also available in Tojikobod) and other districts in the valley in making prices go down while inputs (e.g. machineries, chemicals) are still very expensive and often of bad quality. Therefore when asked about the level of supply, key informants reported that it is good but people lack capital to purchase in the market and tend to rely more on their own production. No other main challenges have been reported. The main issue related to supply are with imported food only, especially given the difficult and expensive procedure at the border (including customs and taxation) and the road status during the winter.

The main issue identified by KIs in Laksh is the lack of money to invest and expand or improve the businesses. Distance from main hubs (Dushanbe, Bishkek) is considered also as an obstacle. Nevertheless there is one local wholesaler with good connections who supplies from Dushanbe and Kyrgyzstan.

As showed in Table 2, all traders interviewed during the assessment reported the lack of storage as one of the main three constrains for his/her business. The second most reported issues were lack of capital and the volatility of the demand. High level of insecurity, to note, was found prevalent in Rasht district rural area.

**Khatlon & Faizobod:** Faizobod appears to have enjoyed the geographical benefits of closeness to Dushanbe, as well as the well-paved roads. KIs responded that there are no specific problems in getting the food supplies whether local or imported products; low local supply due to bad harvest/climate was identified as the critical risk affecting the market. Even though the agriculture production was considered good to KIs, in the comparison with other districts, due to the *tuta absoluta* disease, tomato production has decreased, and the price has increased. Considering that vegetables and tomatoes represent the highest share of local production, this has severely impacted the local economy. Retailers also reported that the lack of monetary resource – lack of adequate money for trading, high food prices from the source - was the main challenges they faced in the food supply.

In Muminobod, the main risks affecting the market were the low local supply due to bad harvest/climate, and the lack of money coupled with limited access to credit. For example, last year, the district experienced high precipitation in early spring and this has resulted in a decrease of wheat production. Access to the credit is low, and farmers would need longer term (perhaps 2 to 3 year term) credit programmes.

According to KIs, Muminobod usually face problems in getting local and imported products. For the local produces, it is more of a low production matter, while imported food challenges are related to the seasonal road condition. In the district, farmers usually store their food items in their private warehouse. There are common silos available for use, but with the lack of the trust, farmers have a tendency to use their own. For retailers, the food lack of adequate own money for trading, low profit margin and limited/unstable demand have been the major challenge

KIs in Khovaling reported that there are no challenging factors in bringing food supplies into the district nor in the market functionality. In the past, seasonally road condition could be problematic, but it has improved, thus making the market access easier. The severity of challenge might be weak as KIs shared with the assessment team, and the main challenges the retailers encounter in the food supply are identified as lack of enough capital for trading and high transport costs.

**GBAO**: The main risks in Rushon, according to KIs, are the lack of capital and access to credit, which is granted at very high interest rates (annually 35 percent) from the commercial banks and thus not affordable for the traders and farmers. Transportation problems were reported as another possible risk affecting the market, road blockage might increase prices for food mainly for vegetables (fast damaging products) and the margin level increases considering the risk during the winter time. The last remarkable episode of long blockage was in 2011, when the road was closed for two weeks, but it usually takes less than one week to recover the road. Lack of warehouses is instead considered as an issue for the farmers to store local production. Based on KIs, Bartang valley markets experience a different situation compared to other areas of Rushon district. KIs highlighted the lack of farmland for wheat planting, Savnob *jamoat* has better access compared to the other *jamoat* in the valley.

Ishkoshim district has the only problem with imported product due to long distance from Dushanbe (730 km). High transportation cost is indeed considered as the main issue according to KIs. Due to imported potatoes from Pakistan, local farmers cannot sell it in other districts and they are starting to barter, for example this year Pamir Energy (the local electricity company) accepted potatoes in place of payment for electricity bills. Another issue which was mentioned by KIs is the lack of the access to credit which used to be more available in the past before the crisis and is not challenging due to the collapse of some of the banks.

The market in Roshtqala relies more on imported production outside the district during the harvest and lean seasons. During the lean season, food prices are expected to increase up to 10-15 percent because of the higher demand and less imported food supply. As main risks, KIs reported that little purchasing power of local population is affecting the local market. In the remote villages, farmers have small capacity to transport additional agriculture produce to the market. KIs reported that because of poor road condition between upper *jamoats* (Sejd, Djavshanghoz). For this reason leather and wool production is going to waste.

In Shughnon KIs reported the banking problems as main challenge, in particular the high interest rate for credit, which is getting less attractive for traders. In addition, wholesalers have started to build cartels and sometimes agree with each other and increase the price for some of the products (e.g. carrot). KIs also mentioned that when natural shocks hit (e.g. Barsem mudflow), when the road is blocked, local people use trails to bring food from the market. According to KIs, during the winter time they are expecting prices to seasonally increase up to 10 percent.

Finally, fortified wheat was not found in any of the 11 assessed districts.

## Competition

**Market is demand and supply-driven, and in general the competition level in DCMs are higher with more competitors than that of *jamoats*. Nevertheless, in Khatlon & Faizobod area, the degree of market competition is relatively higher than that of other areas due to easier access to the country's major markets.**

**Rasht Valley**: The opinion of KIs in Nurobod is that food prices will decrease by approximately 20% in the next few months due to good expected harvest and normal seasonality, and increase again during the lean season. Imported products affect local supply by lowering sale price. The decrease in demand due to lack of money is also a driver of the drop in prices. Key informants presented the case of a bag of wheat flour which was sold at TJS 155 and has gone down to TJS 150, while potato have decreased from TJS 1.8/kg to TJS 1.5/kg. This is due to an abundance of food in the market matched by a lack of liquidity and money to purchase products. The higher market integration and the increase in imports have also been identified as a main issue leading to the drop in prices. Nevertheless, approximately 40-50% of the people in Nurobod, especially those living in remote *jamoats*, tend to rely on their own production and less on the market. Among them, 20-30% of farmers manage to sell their produce by going directly to markets, while the rest sells to collectors. In the latter case traders usually call farmers to order production and to notify them about the collection.

Livestock and meat prices are going down as well with a seasonal variation of approximately 10%. Despite the seasonal nature of price decrease, it is believed that the prices will keep decreasing due to the lower demand and the lack of money. The main reason behind it is identified to the impact of the Russian crisis. People before migrating to Russia for seasonal work tend indeed to sell all their livestock to buy tickets and secure some reserves for the family which will be less secured by remittances than before. For what concerns livestock, traders fully control market and prices.

In Rasht district, the market is reportedly controlled by the government that is monitoring price and production. For instance during big festivities the local authorities set price ceilings as demand increases. This also happens if in case of a disruption of supply (e.g. road closure). Otherwise, in normal circumstances, the demand sets the prices. The market is indeed highly competitive and the Agriculture Department is thus planning to improve coordination among farmers to decide what to produce and increase diversification.

There are only four big farmers in Rasht that provide seeds. For the moment people store their seeds and look out for the most productive ones. In terms of margin and profit, farmers usually get between 10 and 15% on the sale price, while traders get up to 40%. According to KIs, the prices will increase by 5-10% in spring due to seasonality. However, the quality of the harvest will be the main driver of prices increase.

In general, for big purchases, people from the surrounding areas go to the DCM of Rasht, especially for fresh produce (fruits, vegetable). In remote *jamoats* people have their own stock, but market competition remains high. In winter, when their production has terminated, people from the mountain will visit the DCM. When asked about the main supply sources to the district, KIs reported indeed that the area, in order of prevalence, rely on own production, wholesalers from the region and other traders that sell from independent van/trucks.

Regarding the margin of profit on products, in Tojikobod KIs reported a low margin for local retailers due to the high competitiveness and high supply of food. The government is providing common silos for rent for those farmers who can't afford to wait for the lean season to sell at higher prices. The markets in Tojikobod are fully controlled by the demand and supply. Prices are only subject to change due to seasonality. For people in Tojikobod food is the priority purchase, followed by coal for heating. The only other reason beyond the harvest for a change in prices is again the crisis in Russia which gives less purchasing power to the HH who rely on remittances and thus negatively affecting sale prices given the reduced demand.

In Laksh, while the presence of only one main wholesaler serving the area makes the sector not competitive, the competition is considered high at retailer and farmer level. The margin level for traders in the Laksh area is very limited, sometimes only 2-3% on the sale price. For farmers the situation is even worse because of the high competition with foreign produce (e.g. potato from Pakistan) which are cheaper and make the sale price lower in the market. In the last couple of years farmers are actually buying Pakistani seeds as considered of higher quality.

Farmers tend to store in their private warehouses. According to KIs the market is mainly controlled by demand and supply, but a key role is played by the suppliers (either farmers or traders) and the competition at their level. Prices are expected to raise a 10% in the next semester due to seasonality. Nevertheless, given the import dependency on some products, should the TJS devaluates further against RR or USD, this will impact prices of imported food and make the food basket more expensive.

**Khatlon & Faizobod**: In Faizobod, the sale price of food items in the market is expected to increase by 10 percent in the next six months. This may be due to the seasonal impact (lean season) and less imports flowing into the district. The normal margin level for food item is around 5 to 6 percent. Due to the easy access to Dushanbe and high number of the sellers in the DCM, the competition level in the DCM may be considered high. A trader in the DCM reported that there are more than ten shops of similar size and the competition is thus high at retail level as well as at wholesale level due to the easy access to the biggest market in country - Dushanbe. For a similar reason, shop owners in remote *jamoats* responded that the competition is low at retail level, but perhaps high at wholesale level as retail shop owners can easily compare the prices in Dushanbe markets and the prices wholesalers suggest in the area. According to the KIs, the normal way of storing food item is farmer's private warehouse. However, every market has its own warehouse.

KIs in Muminobod anticipates that the sale price of food items in the market will increase by 20~30 percent in the coming six months. It may be attributed again to seasonality and a decrease in imports/ inflows from surplus areas. According to them, the normal margin level is lower for farmers but it may be between 20 and 30 percent in the case of good harvest. Even so, it was also added that farming is mainly for household own consumption, rather than for sales purpose.

Competition level in Muminobod seems to be relatively high for medium sized shops both in DCM and *jamoat* shops. There are more than ten medium sized shops selling different food items in the DCM and retailers pointed out that competition level is high both at retail and wholesale level. A shop owner in a remote area also reported that there are around three medium sized stores within 5 km and the competition is relatively high while the competition level at wholesalers is viewed as low.

In Khovaling, according to the local department of agriculture, the sale price of food items in the market will remain the same in the coming six months. Regarding the competition level, both big and middle sized shop owners in the DCM responded that there are more than ten same-size shops in the market, and the competition is regarded high. Also, it has been shared that shop owners from remote area of Khovaling district also come to the market in order to purchase the food items to sell in their villages. Retailers interviewed in Lohuti *jamoat* also responded that the competition is high both at retail and wholesale level.

**GBAO**: According to KIs, food prices in general is not high in Rushon. If excluding transportation cost, the price for the imported food will not be particularly high and average margin level is less than 10 percent for all food items (for example 10 percent for wheat flour, excluding TJS 5 for transportation). Regarding local production KIs reported that small farmers are mostly oriented on their consumption - after storing their consumption, they start selling surplus to Khorog and Dushanbe by sending bags and boxes with few products. Only few big farmers are selling production to collectors. The local traders in DCM have good ties both with Khorog and Dushanbe, where they can order products and get it delivered in Rushon.

Meat prices have gone down according to KIs, and the main reason is seasonality and importing meat from Murghab districts, where the main production is livestock. Currently the local government is trying to regulate the meat import from Murghab, mainly because of brucellosis disease of animals coming from the region.

In Ishkoshim competition level for retailers is high and for the wholesalers is medium. Only trucks can compete at wholesaler level by bartering imported production with local production. KIs reported that the high level of competition between local and Pakistani potatoes in Khorog (the main selling area for the local production) is rising farmers concern. The margin level for domestic and imported production is low, at around 10 percent. KIs informed that 10-15 years ago locals were bartering and borrowing food, but currently trade is developing and competition increasing among farmers and traders. Farmers from other districts (Shughnon, Murghob, Roshtqala and Vanj) are using Ishkoshim's potatoes for seeds. There are three leading wholesalers in the district, and some of them came from other districts like Vahdat to open their shop in Ishkoshim. WFP staff visited the governmental shop "Tojikmatlubot", where prices for main staple products were lower than non-Tojikmatlubot shops as controlled by the government. For example, prices for wheat flower were found slightly lower than in Khorog, and many shops are not selling it because of very low margin level.

KIs reported that in Roshtqala district, agriculture production meets only 20 percent of local requirement, and the rest is coming from other districts, except for meat. There are only a few wholesalers in the district and the competition level is medium. KIs reported that retailers are complaining on the low demand, and the DCM looks less developed compared to other visited districts. WFP visited the shop outside of the DCM. According to the retailers some products don't have a high level of margin level. For example, the wheat flour and pulses don't give the retailers much profit, hence they try to diversify the food commodities in the shop. The competition at retailer level is high and they are trying to attract locals who usually go to Khorog DCM. Governmental shop "Tojikmatlubot" was closed in the center, but t there are other shops in the bigger villages and the representatives of the "Tojikmatlubot" reported that they are not selling stored food yet, while trying to keep it for winter time when the prices will go up.

In Shughnon or Khorog DCM, the market is competitive, with prices generally set by the high demand from people coming to Khorog DCM from neighbor areas. The competition is high at the retailer, wholesaler and farmer's levels. The Government is monitoring prices and the State Reserve Agency has a dedicated area in the DCM to sell main staple product. Independent trucks often come to the DCM area (usually outside of the market) to sell food. The wholesalers have good connections with national traders and they have agreement to supply production when the demand increases. The large logistics companies are transporting NFI (mostly building materials) to Dushanbe and other districts, and sometimes they are importing food production on the way back when demand goes up.

**Table 3: Food Sources in Target Areas**

| Target Areas | Sources |
|---|---|
| Rasht Valley | Own production, wholesalers from the same and other governorates including Dushanbe and Kyrgyzstan, and independent vans and truckers |
| Khatlon & Faizobod | Own production, wholesalers from the same and other governorates - mainly Dushanbe, Kurgan Tyube and Kulob, and truckers |
| GBAO | Own production and wholesalers from other governorates – mainly Dushanbe. |

## Traders' Credit System

**Food purchase on credits is prevalent in the target areas as due to shortage of money and many resort to utilize the credit service in order to purchase food despite the limited access to the service. The usage of credit appears to be relatively higher in GBAO than in Rasht Valley and Khatlon & Faizobod.**

**Rasht Valley**: Credit is commonly used both in district central markets and *jamoat* shops. While the Key Informants have identified no money or limited access to credit as risk to markets, most of the shop operators provide credits to their customers whether road shops with a minivan or truck or in a building in the DCM. Credits were also available in *jamoat* shops.

**Khatlon & Faizobod**: In Faizobod, credit is a common use, especially in remote areas. The share of food sold on credit is 10 percent in DCM shops and 30 percent in *jamoat* shops on average. Medium sized shop owners in Muminobod provide their commodities on credit, which constitutes 30 percent of the monthly sales on average. There was no difference observed among the shops in the DCM and *jamoat* shops. Also, Khovaling residents appear to have utilized credits for commodity purchased from the local shops.

**GBAO**: In general, compared to other regions, selling on credit is commonly used and the percentage of providing loans for customers is higher in all visited districts. The Key Informants attributed it to lower purchase power of the local population and collapsing of some banks in the country. Credit is commonly used more in independent shops than in DCMs. Credit use was also observed in the trading system: wholesalers in the district centers have an agreement with big suppliers to pay after selling production.

## Food Availability and Sources

**In general, diverse food items are available in the DCMs from fresh vegetables to imported wheat flour, but the diversity was limited in *jamoat* shops. Different food sources along with the characteristics of the regional agriculture production and geography have influenced the dynamics of the market. Nevertheless, fortified flour was rare to be found in markets.**

**Rasht Valley**: Diverse food items were found in the DCMs of Rasht Valley districts. When food not available, the central government appears to interfere in the market and provide its assistance for the distribution by sending truckers to remote area. HoM in Garm also shared his experience of sending truckers to far-away districts such as GBAO. In addition, on the mission visit to remote villages, truckers bringing wheat flour and fresh vegetables from Dushanbe are also witnessed. Limited food items were found in the shops of the remote areas and big portion of the items were sourced from Dushanbe. Reflecting the livelihood style in the remote area, villagers also responded that they may purchase food products from neighbors with cash.

**Khatlon & Faizobod:** Similarly, diverse food items were on display and ready to be purchased by consumers. For the geographical proximity to the capital city, suppliers/ retailers in Faizobod could go to Dushanbe or easily buy from wholesalers within the district so most food items were available to be purchased in Faizobod. Muminobod and Khovaling represent a different case. The two districts get their food supplies mostly from Kurgan Tyube and Kulob. In addition, collectors from Sughd come to Khovaling to purchase dried fruits and sell them in the Russian Federation.

**GBAO:** Different food items are available in the DCM, but the limited food items in Jamoat shops differ among the target districts. To note, approximately 80 percent of food commodities in Khorog and district DCMs have been imported from Dushanbe. This may be also explained by the market integration, in particular the correlation between Dushanbe and Khorog, as previously discussed. The food items in the remotely located shops appear to have high variety of food items with slightly higher prices, mostly sourced from Khorog DCM.

## Characteristics of Shops

**District Central Markets (DCMs) are likely to be open every day and can be accessed by the community. In relatively more remote areas where most of the residents are engaged in agriculture, small shops were often witnessed, but not always. For example, In Laksh, a big sized shop near the border with a diversity of food items on display was present.**

**Rasht Valley**: In the DCMs of the targeted four districts, most of the shops were small-medium sized but also few big size shops were present with a variety of food commodities. In the remote areas, most of the shops interviewed were small-sized and villagers may also purchase food commodities from neighbors or nearby DCMs. To note, however, a big sized shop was also available in a village near the border with Kyrgyzstan.

Most of the DCMs were government controlled except Laksh, and sellers in the DCM may be categorized as contractors and non-contractors. Traders had different levels of electricity access, depending on the area where they operate their shops or type of shops (whether in a minivan or truck or settle-in shops). Nurobod DCM appears to have the most limited electricity especially in winter.

Alongside the regular shops, the role of truckers in the Rasht valley is significant as they deliver and sell food commodities that are relatively scarce in the remote areas. A few truckers said they also collect potatoes from Rasht and sell in other districts, and also bring in the other food commodities from other districts including Dushanbe.

**Khatlon & Faizobod**: Most of the shops in the DCM of Faizobod, Muminobod and Khovaling are in well-structured or semi-structured buildings and few truckers were found outside the DCMs. The size of shops varied. However, there are a few differences among the three districts. In Faizobod DCM, most of the sellers are small sized, and the market is well organized by food groups. Also, a big sized shop was also in business outside the DCM. Farmers appear to get to choose selling their produces to retailers, collectors or selling directly in the farmers' corner.

DCM in Khovaling had both public and private sections, but not organized by commodity. For the private section, sellers were requested to monthly pay around a small fee (TJS 10) for the water and electricity. While in DCM different sizes of shops can be found, only small and medium sized shops are available in *jamoats*. Tojikmatlubot shop, which is supported by government, was also found inside the DCM. In Muminobod, right outside the DCM, meat sellers were witnessed, but Tojikmatlubot shops were not found in the DCM. In remote *jamoats*, medium sized shops were found.

**GBAO**: In the visited districts, most of the shops were small-medium sized. Khorog is an exception and big sized shops are common and have a larger assortment of food. In **Rushon** and **Ishkoshim** shops within the DCM are small and medium sized, but outside the DCM there are some big shops selling food to costumers and smaller retailers. Most of the shops have electricity all the time and enough storage space in their warehouses located next to shop. Almost all shops are private and/or rented, except governmental shops Tojikmatlubot whose space is also used by informal sellers to supply other food items not supplied by the government. There are some minivans or truck selling vegetables and meat on the street close to the DCM area. In **Roshtqala,** the DCM appears to have very small-tiny shops (10-15sqm) with limited storing capacity, while nearby the main road, there are bigger and more developed stores selling various food commodities. Central Market of **Khorog** has a big hangar with many retailers having a spot for trading, and truckers outside selling mostly fresh produce and imported commodities. Wholesalers gather in the particular area called Selkhoztekhnika and supply the whole region.

## Response Capacity

**Key informants in all district visited believe that the market has the capacity to meet the increased demand within a short period of time. It appears that Khatlon & Faizobod area has a higher capacity to meet the increased demand than the other two areas perhaps due to the easy access to the major markets in Tajikistan, and for the characteristics of the livelihoods, GBAO is the most dependent on truckers.**

**Rasht Valley**: In Nurobod, KIs believe that the market would be able to absorb an increased demand within one week of about 40%. Within the Nurobod district, margins are considered to be higher in the district center because of lower transport costs, hence higher margins to traders and farmers. Trading is not controlled in Nurobod, therefore margins can vary between 20-40% for the traders. Price is determined freely.

The Rasht DCM is working well, but there is a small storage of food. In case of an increase in the demand, the district that currently exports 20-30% of their harvest to neighbor districts will be able to redirect this supply to the internal market. As in the full region there is only one harvest per year, if a natural disaster hits the district, it would still take one year to restore the supply of locally produced food and import dependency would thus have to increase.

In Tojikobod, the variety of source makes sure that there are no problems with the supply of main food commodities. The market would indeed be able to absorb an increase in demand of 100-200% within one to two weeks (depending on the season). A proof of this flexibility is given by annual festivities (e.g. Eid), when markets trade double or triple the same food as in normal periods. Another example was given referring to the spring purchase of potato seeds for sowing season, when the increase in demand is compensated by higher rate of imports.

Traders in Tojikobod responded that they have normally more than 100 customers per week, and claimed that even in the shock such as landslides and floods, the number of the clients would stay the same. They also confirmed that market can be well supplied; if the demand in the market increases by 50%, they may be able to bring the equivalent of supplies within a week. Also, truckers were witnessed outside the market, and to note, there were many wheat sellers on the day of mission visit.

In Laksh, even if an increase in demand would affect the market, it will take no more than ten days to respond to that with higher (even double) supply. Key sellers in the road market reported that their shops are open five days a week, selling diverse food items including fresh vegetables, flour, rice, oil, etc., and that they received more than 50 ~100 customers in the past week. They expect that demand will remain at the same level when a shock in the region occurs, and also believe that can meet the market demand up to a 50% increase within a week, but might need additional support (e.g. another car) to meet the 100% increased demand.

Retailers in the Valley showed a more positive prospective for the supply capacity. Interviewed traders in Nurobod, Rasht and Laksh responded that they have the capacity to increase their stock within a week, while those in Tojikobod answered that it might take less than a week to meet the demand of a 100% increase.

**Khatlon & Faizobod:** Faizobod district does not face big issues in getting their food supplies whether imported or locally produced, and most of the wheat flour is directly imported from Kazakhstan and the Russian Federation, therefore the key informants believe that the markets can absorb an increased demand within a week up to 100%. In Muminobod, The market is able to absorb 20~30% increased demand within a week. Wheat is mostly imported for Kulob and Kyurgan Tube, and the district has stocked food for emergencies. KIs from Khovaling agriculture department say that there are independent traders coming in with food supply, and there are no related challenges. The market can absorb a 100 increase of demand within one to two days as there are strong traders.

**GBAO**: In Rushon, according to KIs interview, the market will be able to absorb a 30 percent increase in demand within one week, except for Bartang valley where poor road infrastructure will delay the recovery. Respondents of FGDs explained that during the recent disasters in Bartang valley food was delivered by helicopters, so the main risk for that area is higher prices and possible road blockage. The other parts of Rushon do not face significant issues with supply based on FGDs.

The Ishkoshim State Reserve Agency and Tojikmatlubot are monitoring the prices and store main stable products. KIs reported that they could cover an increased demand of up to 100 percent within two weeks and they reported that possible natural disaster might temporarily affect the supply only for imported production outside the district. According to respondents, the recovery time of supply usually take less than a week.

In Roshtqala KIs reported that DCMs would be able to absorb an additional demand of up to 70 percent within one week, if the traders have enough money turnover. Moreover, “Tojikmatlubot” have shops in the large villages, which have enough storing capacity for food that can be deployed in case of emergency.

The DCM of Khorog is serving customers of Shugnon and other districts. Representatives from the agriculture departments informed that many independent traders are coming in with food products. Competition is high at all levels and the DCM will not face issues on supplying the market. According to KIs, the DCM can absorb a 50% increase of demand within two to three days as there are big wholesalers, independent come-and-go trucks, active traders and transportation companies which are mostly oriented on importing NFIS from China, but bringing food on the way back.

## Gender

> **The level of gender equality varies, depending on the livelihood characteristics of the target areas. According to the key informants, the role of women in the intra-household decision making is more critical in GBAO due to high labor migration, compared to that of Rasht Valley and Khatlon & Faizobod. On the days of visits, more men were present in the DCMs of Rasht Valley and Khatlon & Faizobod. On the other hand, the assessment team witnessed more of gender balance among the retailers in GBAO.**

**Rasht Valley**: Nurobod district seems to be partially inclusive of women. It was reported that women can enter the market as much as men do, and cover roles of responsibilities such as head of market. Nevertheless it was noticed that the physical-intense nature of the work along with the harsh winter conditions constrain the participation to the market for women in winter. While looking at household level, men usually decide how to spend money. However women, being those who take care of house-related work, provide food shopping lists to men who go to the market (men tend to be the one going to buy because of long distance and high weight of the bags).

Also in Rasht, Tojikobod and Laksh women were reported to have the same opportunities as men to enter the market. Nevertheless there are more male clients in Rasht, while in Tojikobod trader sector tends to be male dominant given the hard physical work that it entails. According to KIs, this is mainly due to the physical strength needed to transport the purchased food.

In terms of decision-making at household level, women don't usually have a strong role in Rasht and Laksh, while in Tojikobod they take decisions on food related expenditure.

**Khatlon & Faizobod**: KI from Faizobod, Muminibod and Khovaling all report that there is equal access to the market both as buyers and sellers, and it is more of a matter of personal capacity as a salesperson. The household decision-making process involves consultation with the partner/spouse. Nevertheless, higher number of male sellers were witnessed both in DCMs and *jamoat* shops on the days of visit. It might be also due to the harsh winter weather, but it seems that women's market participation level is less than men. However, as a separate note, few women were in high decision making position in the district government body such as deputy chairman in Faizobod.

**GBAO**: In all four assessed districts in GBAO**,** KIs reported that only women in the households decides the share of income to be spent on food. When asked about the entrance to the market, KIs reported that there are more women working as retailers and saleswomen in the shops. The reason is that males are more prone to migrate and work in Russia. During the survey it was observed that majority of the sellers are females, but the owners are the head of household (mostly males). In the *jamoats*, all family members are working in the shops, on rotation or with divided responsibilities.

## Participation to Voucher Programme

**In general, when the interest in participating in WFP's voucher programme, all of the trader interviewees gave their positive response and also expressed their willingness to have WFP staff to visit their shops for monitoring purposes.**

# 7. Farmers Focus Group Discussions Findings

### Farming system

**In all districts, at least a form of farmers group was present but seen as weak association. According to the interviewees, farmers in Nurobod, Rasht, Tojikobod Laksh and Faizobod tend to sell more their production than those in other districts, and the farmers in the remote area is inclined to rely more on their produces for their own consumption.**

**Moreover, in general, farmers expressed their willingness for their direct engagement in the sales in the market in order to have higher margins but limited for the farming responsibilities. Selling right after harvest or storing at farmers' private warehouse was the most common method of production storage.**

**Rasht Valley**: Farmers in Nurobod district are grouped in farmers associations. Big associations reach 150-200 farmers, while small ones (in remote *jamoats*) are as small as 5 members. The associations usually offer various services. Among them some have collective warehouses/silos and provide assistance to the poorest and most vulnerable (e.g. disables), either through cash or food. Collective negotiations are considered to be not needed as farmers are well aware of prices, but sometimes reduction of taxation to the local authorities is proposed by farmers association on behalf of the most vulnerable households. Regular meetings are organized and information is shared frequently. Moreover farmers associations also offer common land to rent to poor farmers.

Regarding the trade of their products, farmers in Nurobod tend to sell their products to traders. Traders come on daily basis and put their trucks in main points of the town and collect farmers produce. Their product then reach neighbor areas and Dushanbe. When of good quality they can also be exported by traders to other countries. Hence when asked where they sell their products, farmers answered that they either sell at the farm gate to collectors or within the district/region to traders.

Also Rasht farmers describe a positive outlook of the markets. According to focus group discussion participants the market relies equally on imported and local products. The local supply chain is working well, much better than in the past when everything was imported. Trade within the region has also gained weight. Agricultural production has increased from the past, especially thanks to humanitarian and development assistance. This provided both higher soft skills (knowledge and awareness), as well as better quality of seeds. Nowadays though, the quality of seeds has decreased again.

In the district there are around 150 farmers who are members of farmers associations, but many more (about 2,000) could join. The usual services offered by the associations are regular/seasonal information sharing sessions and collective negotiations. Additional farmers associations provide consultations on planting, seeds, etc. given the low capacity of some farmers.

The most common selling strategy used by farmers in Rasht depends on their storage capacity. It is preferred to store and wait until lean season to sell at higher prices, but most of the time this is considered a luxury and farmers sell right after the harvest. Rasht farmers sell their products to the markets directly, to collectors and, if managed to store during post-harvest, they will go to wholesalers in lean season. Most of the products reach consumers within the region, but some high quality product can sometimes be exported abroad.

In general farmers interviewed in Tojikobod reported a positive and enthusiastic feedback about the market in their district. Especially compared to past, markets work much better now for their produce. There is indeed a group of traders who come buy their produce at the farm gate and sell it to the market. This makes things more convenient for them because reduce costs and time dedicated to the sale. As a result, agriculture production has increased year by year.

Tojokobod farmers confirmed that the price of their produce is set by the demand. Also the level of competition among traders is very high and allow them to get fair margins. Farmers usually get to know prices from friends/relatives who live in the main cities by phone.

When talking with farmers in Laksh, respondents confirmed that markets in Laksh work very well. With regards to local produce, there is high competition of traders and no problems related to prices. Production in 2015-16 has been better than previous years thanks to a good weather which led to a rich harvest. In Laksh farmers deal with traders, collectors and retailers. They tend to sell their products within the district or the region. Some of them reach Dushanbe and apples are sold also in Kyrgyzstan.

The existence of farmers association is quite new for the area. The only association was constituted recently and is made of 85 members out of 1350 farmers counted in the area. The 85 members own a total land of 236Ha.

**Khatlon & Faizobod**: In Faizobod, farmers report that market is well running for the products they sell, but it seems that traders have higher profits than farmers. Nevertheless most of the products they cultivate is sold to traders. In recent years, the agriculture production increased for potato and wheat, but tomato has decreased due to the recent occurrence of *tuta absoluta*. As a result, the price of tomato drastically increased in the last year.

There is a farmer association, but representatives are not aware of the actual number of the members. The association offers credit and collective negotiations while training support is no longer available. Their products are sold within the district or the region (Dushanbe). According to the farmers, market prices are set by the traders. Farmers receive the market price information by directly approaching the markets.

In Muminobod, markets are functioning well, but there are no farmers in the market.

Farmers usually don't have the time to sit and sell in the market as they need to cultivate their produce. It was reported that more profits are going to the traders. There are few cooperatives, and for seeds association there are around 460 members. The head of the association collects relevant information and provides it to the government. Farmers usually sell their products to collectors, traders and retailers in the DCM or regional markets. There are public warehouse, but farmers are afraid of the losses. Some of them have their own private warehouse but, due to lack of capital and liquidity, they tend to sell right after the harvest.

In Khovaling, farmers usually sell their products to collectors and wholesalers within the neighbor districts, including the markets in Kurgan Tyube, Kulob and Sughd. To note, buying with cash from and bartering with other farmers are also a common options in the district. There is a farmers cooperative, run by the government, with 700 members. According to the head of the association, they offer collective storage and collective negotiations. For the latter, they have worked to lower prices of seeds. In addition, they provide a platform for discussion and information sharing.

**GBAO**: During the focus group discussions (FGDs), farmers in Rushon informed that they are selling products mostly to the middlemen and local traders. The high percentage of the production goes to Khorog DCM because of lack of demand in Rushon DCM, and the local population relies on their production for own consumption. There is one farmer association with 340 household members in Rushon, which provides services like information sharing sessions, assisting with documentation, consulting on taxes and organize collective negotiation among farmers for better usage of water.

In Ishkoshim farmers are selling their produce mostly to traders in the DCM, and there is not a particular place for farmers in DCM. There is a weakly functioning farmers association in the district that provides costly services like cultivating land by tractor (800 TJS/Ha) during the planting season. The mostly produced commodities by district farmers are potatoes, wheat, vegetables and fruits. The district has more farmland compared to other visited districts and farmers sell production to Khorog DCM. With regards to potato seeds, Ishkoshim farmers sell them in the entire GBAO region. The selling strategy used by farmers is to store production and wait until prices increase, but it depends on the storing capacity and debts accrued by farmers. During the interview, farmers could not tell the name of big suppliers of food commodities, but there main buyers are independent minivans and trucks that come to the villages and purchase their products.

In Roshtqala farmers sell only 10 percent of locally produced food commodities while using the other for household consumption. Some extra production is also stored for winter time and emergencies. The farmers association in the area helps in collecting taxes and provide the government with farming statistics in the district. They also organize meetings with member farmers to share information. Despite the low power of the association and the low surplus, the access to the market is good and farmers sell their extra production right after harvest to traders in the DCM (mostly potatoes and meat, before winter time).

Farmers interviewed in Shughnon reported that the market in general is working well for their products, farmers can bring their products to the market or sell to collectors. Compared to the past, the agriculture production has increased. Farmers confirmed that the price of their production is set by demand and the level of competition among traders and farmers is high. The DCM of Khorog relies on both local and imported produce, during the lean season food commodities are entirely imported from Dushanbe and other districts. There are 12 farmers associations in the district with 4,800 members in total, providing the several services, such as legal counseling, collective negotiations and information sharing. District farmers usually use their own warehouses for storing and trying to sell production when the prices become convenient.

### Challenges for farmers and Climate

**Farmers in the visited 11 districts report that they have been negatively affected by climate change in recent years which have affected their production. In most of the districts visited, high cost of agriculture input and the lack of capital/credit have been big challenges to farmers in farming. Farmers in Faizobod responded that they have the lack of enough storage capacity which might be linked to the close market connectivity with Dushanbe, main hub of the market system in Tajikistan. Similarly, farmers in Ishkoshim also experience the storage problem but also the high cost of transportation fee for its geographical location.**

**Rasht Valley**: Farmers confirmed other KI's impression that in Nurobod area the markets work well for their produce. Nevertheless some issues related to production were commonly identified. Weather has indeed changed in the last few years, with strong rains (including hailstorms) which have affected the planting season. In addition, new diseases and pests have mined the production. The latter leads to an increase in needed inputs for farming (pesticides) which are very expensive. Furthermore, pest affects seeds (especially for potato) leading to bad harvests. More in details, farmers reported that strong rainfalls can ruin the blooming of trees and thus impact the harvest. Weather has been more volatile in the last few years reaching extremes more frequently. In this case farmers declare themselves powerless, since they won't be able to change the climate and natural hazards.

When asked what they believe could be a viable solution, the farmers responded that they need new seeds that are climate adaptive (e.g. Holland potatoes) and credit at low interest rate. Farmers indeed can only access credit from relatives and friends due to the low/zero interest rate and the longer term of repayment. Similarly, farmers do not have access to climate insurance on their produce, mostly because of lack of information about it.

In Rasht, the changing climate of the recent years has also brought new insects and pests and led to an increase in needed investments in chemicals and minerals. When asked about how the weather and climate hazards are affecting the livelihoods in their community, farmers responded that the area is subject to strong rains, frost waves, extreme weather, mudflows and floods. In specific orchard farmers are affected by heavy rains while potatoes are at risk if there are frost waves. Farmers reported that they would subscribe to insurance plans (but lack in capital) and have participated to some DRR projects to prevent or reduce the risk of these challenges. Compared to the past, farmers reported an increase in rains in summer.

Among the main challenges related to the cultivation of their products, farmers listed the high cost of machineries, the high costs of chemicals and the lack of capital. As solutions they proposed to have stronger farmer associations that could negotiate good collective contracts for chemicals and pesticides. Furthermore farmers would appreciate an ease of the credit system, linking banks to farmers and providing more ad hoc loans (e.g. longer terms, lower interests). As of today farmers reported to not have access to credit. The presence of middlemen (either collectors or traders) has not been identified as a problem, but rather a good linkage option for some farmers, who in the past were not able to sell their produce, to the market, avoiding costs and time of commuting.

A couple of problems were listed during the focus group discussion in Tojikobod. Here the main issue for farmers is the high cost of agricultural inputs, mainly chemicals and machineries (including fuel). As a consequence of the increased production, a lack of storage space has also been identified as a major challenge. This leads farmers to sell right after the harvest, losing the opportunity to store and sell when prices are more convenient. In Tojikobod there are no farmers associations and therefore no collective services are offered. Products are sold at the farm gate to collectors and sometimes to regional traders from other districts. Their produce is sold in markets in Tojikobod (small farmers), regional and national markets (big farmers).

Farmers have access to credit, but tend to get it from friends or relatives due to the low/null interest rate and the long term of repayment. The same happens with insurance plans, which nobody uses because they are too expensive and not reliable. There is indeed a general mistrust in insurance companies. Should they become reliable then every farmer would get one.

Despite the improved production of the recent years, the weather has had a negative impact on produce, mainly through heavy rains, frost waves and high temperatures in summer/spring (e.g. potato) which usually leads to a higher spread of plants diseases and pests. Pests and they high costs of pesticides are considered the main challenges for farmers who declared themselves helpless in terms of solutions. The only basic solution would be to have more capital to buy more and better chemicals and improve the water supply. Climate has become less predictable in the last few years with more extreme conditions than before.

In Laksh the boom in production of 2015-16 season made farmers realize that there is a problem in the area with the lack of storage system which constrains them to sell right after the harvest. Another issue encountered by Laksh farmers is the high cost of chemicals and fuel for their machineries, which is common in all other districts of Rash Valley. When asked why they created this associations, farmers reported that the main purpose was to collectively buy agricultural inputs that otherwise would be too expensive (chemical, machineries) and share them. Another reason highlighted was the possibility of doing collective negotiation for taxes reduction and buying seeds.

Finally farmers in Laksh only have access to credit from relatives and friends because after the crisis banks have stopped providing small credits and/or made them very expensive. Sometimes farmers also get credits from traders. Regarding insurance plans, the problem is similar to Tojikobod, with a widespread mistrust in the system.

Laksh farmers reported that climate has been affecting their produce, with heavy rains (increased compared to the past) and frost waves. As in other districts of the region, this mostly affects orchards and potatoes. As coping strategy, farmers are investing in improved water supply.

**Khatlon & Faizobod**: In Faizobod, farmers responded that the main challenges are related to unpredictable seasons and the lack of enough storage capacity. For the weather/climate hazards, farmers responded that productivity changes differ for each commodity, with some produce better adapting to higher temperature, while other needing lower temperature (e.g. potato). In response to the challenges, farmers believe that they could benefit from improved farming skills.

In Muminobod, while wheat production has decreased, the production volume of potato, carrot and onions has increased in the past few years. If there is demand, they could also cultivate dried fruits and vegetables. There are suppliers coming from Sughd. The main challenges they face are expensive fertilizer and low quality seeds. As a solution, farmers advocate for long-term credit and a better irrigation system.

The two main challenges for farmers are the changing climate and the high costs of agricultural inputs (i.e. fertilizers). Farmers also shared that they have experienced weather/climate hazards with too high temperature for potato, dust for floral products, and heavy rain for fruits. Bee-keepers, livestock owners and farmers are the most affected ones. In response to the hazards, farmers tend to sell more livestock, plant fast growing produces or ultimately migrate to the Russian Federation for better job opportunities.

In Khovaling, farmers face the challenges related to the unavailability of high quality seeds for the cultivation of wheat and fruits; good breeds of livestock; and bad weather condition, especially for fruits. Viable solutions for the challenges might be attracting a company to bring in better quality of seeds and getting good breeds of livestock to meet the needs of milk and diary.  Credit before planting was also highlighted as a solution. In the short term, farmers are migrating to the Russian Federation for labor, and utilizing their savings, whenever available.

According to farmers, in the recent years, climate hazards have increased. There have been heavy rains, lower level of snow, and higher temperature. For instance, early snow in November2016 was not expected. Summer temperature in Khovaling does not usually exceeds 32 degree Celsius but it reached 40 degree Celsius in 2016 season.

Fruits have been heavily affected. The frost in February and the flower blooming in April, and another frost again in May, highly affected the harvest. In addition, due to higher temperature, potato production has also been negatively affected.

**GBAO**: In Rushon, as a main challenge, interviewed farmers indicated a lack of storing capacity and warehouses. Also farmers reported that they have lack of access to agricultural inputs (seeds and fertilizers) as well as to enough capital to improve livelihood and develop farming. They also reported that the credit system is not working properly, and high interest rate are applied by commercial banks. As a solution, respondents propose an improvement of the credit system by providing agriculture loans with a low level of interest and longer term re-payments schedule.

The climate hazards like heavy rainfalls and mudflows are affecting local population mostly during the spring and summer time. Agriculture productivity has changed negatively due to climate change, in the past farmers indicated that precipitation patterns were different and they had more snow accumulation in the mountains than the current frequent rainfalls. During the summer time when the temperature is higher farmers have less water for irrigation from the small rivers and springs. Most of the projects in the area related to water are only for drinking water, not for irrigation. Only a few villages have been supported with better irrigation through new pumping assets or the rehabilitation of them.

The main challenges of the Ishkoshim farmers were reported to be high transportation cost, lack of storing capacity and processing capacity. They also complained about weak demand affected by the collapsed bank Agroinvestbank, which currently is not able to return deposits. According to FGD farmers in the past had a better condition for agricultural credits. As a viable solution, which farmers proposed are to attract investors in the area and improve processing industry especially for the meat productions. As a climate hazards affecting locals, interviewed farmers reported that the temperature might decrease affecting blossoming fruit trees during the spring time and wind erosion is affecting the agriculture productivity. The main coping strategy for these challenges is to search for alternative jobs in the district and labor migration to Russia.

The list of challenges in Roshtqala are similar to the other GBAO districts. The main issue for farmers is the high cost for fertilizers and machinery. Good quality machinery are critical because most of the land is on the slope and normal machinery can't be used in the area. Farmers reported that weather fluctuations are affecting farmers livelihoods and lead to new plant diseases which were not typical for this area. The only coping strategy the farmers would resort to is to rely on humanitarian aid.

In Shughnon, during the focus group discussions , farmers reported that the main challenges are the high cost for fertilizers and lack of access to high-quality seeds. For the last two years, prices of fertilizers have increased and farmers have not been able to ensure the quality of the chemicals. As a solution they propose higher support from the farmer associations to cultivate seeds and make more effort on fundraising and looking for alternative sources of high-quality fertilizers. The climate related hazards are similar to that of Rushon. The precipitation pattern has changed, and the area is affected by more rainfalls (torrential rains) than snow. The coping strategy for the farming households are to resort to labor migration as an alternative source of income. Farmers are also spending less on NFIs and limiting their investments in agriculture assets for the next sowing season.

## Products and variety

**The geographical characteristics have led the different variety of agriculture produces. Main produces of Rasht valley are potato and livestock products. Khatlon & Faizobod cultivates more of vegetables and fruits, and GBAO area have more livestock.**

**Rasht Valley**: The three main products cultivated by farmers in Nurobod are potatoes, wheat and fruits. When asked if they could produce something else if there were demand, farmers listed tomatoes and pumpkin. About their selling strategy, in Nurobod farmers tend to first store what they will need for their own consumption and then approach the market to sell the surplus. Due to low storage capacity, farmers confirmed that it is preferred to store stock for their own consumption and sell the rest right after harvest.

In Rasht the main commodities produced are potatoes, fruits, honey, meat and vegetables. Should demand exists about other products, farmers in Rasht would be able to supply the markets with additional potatoes, nuts, wheat flour, pulses and other vegetables.

Farmers in Tojikobod currently produce mainly potato, apples, livestock and wheat but could also plant carrots onions and produce diary commodities if the demand were consistent.

The main commodities produced in Laksh by farmers are potatoes, meat and vegetables. They could, in case of demand, plant beetroots, wheat (only if they had milling equipment) and sell wool/leather products from their livestock. When asked what would are the main issues related to their work, they reported the lack of capital which makes them less likely to be able to buy good machineries and chemicals. Amongst the proposed solutions, farmers suggest to have quality checks of the chemicals (i.e. lab tests), more targeted investments and small factories to work on dairy products.

**Khatlon & Faizobod**: The main agriculture produces of Faizobod are tomatoes, apples, and potatoes, but if there is demand, they would also be able to cultivate maize, wheat, and pulses. In Muminobod, the main produces are wheat, potatoes, and other vegetables and fruits. In Khovaling, wheat flour, livestock and fruits are the main produces, and if there is demand, farmers are also willing to cultivate potatoes, tomatoes and cucumber.

**GBAO**: The main production of the Rushon districts are potatoes, wheat and vegetables. Farmers will be able to diversify agriculture production by planting more maize as well as increase wheat and vegetable production. The respondents reported that farmers are trying to store their production for better prices, but due to lack of warehouses they store only for their consumption and some seeds for the next season.

Farmers in Ishkoshim mainly produce wheat, vegetables and breed livestock. Should the demand increases in the local market, they would be able to cultivate fruits and increase the potato production. Currently, the local government is trying to reduce the import of meat production from Murghob district in order to stimulate the weak production of meat in the local market and prevent animal disease found in the imported meat. The respondents reported that some livestock oriented *jamoats* would be able to supply meat even for the small factories (sausage factory).

The main production of Roshtqala farmers are potatoes, fodder and livestock. According to the respondents they do not have enough capacity/farmland to increase the production in case of higher demand. *Jamoats* located on higher altitude have only access to pasturelands which is more suitable for livestock flocking and meat and dairy production. According to FGDs, respondents reported that if the road condition will be improved the households in the *jamoat* will be able to increase the meat production to cover the higher demand.

Shughon’s farmers produce mainly potatoes, wheat, vegetables and fruits in the area and they would be able to increase or diversify food production (tomatoes, cucumber cabbage) if the demand increases. According to interviewed farmers, they are trying to store their production and start selling when the prices increases. Farmers in Shughon have closer distance to Khorog market. Hence, compared to farmers coming from the other districts, they do not spend much for transportation.

## Decision-making and Gender

**In Rasht Valley and Khatlon & Faizobod, farming is more male dominant and the voice of men is stronger in the farming related decision-making process even though household head and the spouse discuss. On the other hand, the role of women farmers in GBAO appears to be bigger mainly due to the labor migration to Russia Federation, and both men and women get engaged in the decision-making. To be noted that men represent the vast majority of those forced to migrate and seek opportunities abroad. The more migration-oriented households the more women assume responsibilities and increase their weight in decision making.**

**Rasht**: In Nurobod, all farming decisions are taken by the head of household (including when and what to plant), most of the time a men. While not many women are in the farming business, their decision power is considered relatively high within the farmer household. It is also worth to notice that these decisions are usually not influenced by traders, government or any other player in the markets. Government tends to recommend what to plant and when through the Agriculture Department. However often farmers have access to information on prices through traders themselves, who could thus influence the market and the farmers decisions. This is often the case of remote areas in Nurobod, especially for small farmers.

Similarly, in Rasht the farmer himself is the one who decides the price of the commodities on sale, with low or no pressure from traders and government. Farmers associations can recommend on when and what to plant, but farmers consider themselves independent in taking this decision. Women farmers represent around 20% of members of farming associations and even when not farming, they tend to influence some farming decisions. Challenges between men and women were reported to be similar.

Farming related choices in Tojikobod are taken by the whole household and not only by the head. Women were reported to participate in the farming decision-making process, but represent only a 10% of the farmers in the area.

Even in Laksh farmers' decisions, including when and what to plant, are driven by the head of household. To be noticed that farmers reported that the head of household is most of the time a woman, including the head of the farmers association. 70% of farming workforce in the area is represented by women. No gender-specific challenges were reported.

**Khatlon & Faizobod**: Farmers in Faizobod believe that traders set the market prices, limiting farmers power in the market. Interviewed male farmers also added that women participate in the farming decision-making process at any step, but their perceived limited farming skills and knowledge have made women's part-taking difficult. Even so, the household head decides together with the spouse when and what to plant.

Farmers in Muminobod responded that they usually decide when and what to plant, but government specialists (Ministry of Agriculture) also provide recommendations. Usually the farmers (household head) decide the price of the commodities they sell. They receive price data from other farmers (word of mouth). Women are also participating in the farming decision-making process at any stage and according to the farmers, there are around 70% of those employed in the farmers sector are women. Men are more engaged in planting and harvesting seasons and women usually contribute in the growing season. The harvesting and planting workload might be physically challenging for women.

In Khovaling, farmers responded that they usually decide on when and what to plant and sell right after harvest as well as the price of the commodities they sell. They also added that women take part in the farming decision-making process at any step, but the head of household decides when and what to plant. Given FGD responses, it seems that women in Khovaling are less engaged in farming compared to other districts in the region.

**GBAO**: In Rushon respondents of FGDs reported that agriculture decisions are taken by the head of the household (usually male), but due to a high rate of labor migration in the district 50 percent of the farmers are women. All challenges related to agriculture pertain equally to men and women farmers.

Ishkoshim farmers reported that they decide themselves what and when to plant, together with their spouses, because they equally contribute the farming workforce.

The same situation was found in Roshtqala. Here female farmers represent around 70 percent of the total members of farmers association. According to the respondents, the particular primary challenges for the female farmers is related to the hard physical work and the competing task of looking after the household domestic issues.

In Shughnon, the representation of woman farmers is around 20 percent according to respondents of FGD, but most of the decisions are jointly taken with the spouse, regardless the head of household being a man or a woman.

## Information and early warning

**Farmers have identified that their main source of market price is personal and professional (market) networking and television for climate information. They highly value the information they are receiving and identified mobile phone as the most preferred communication tool for farmers to receive market prices and early warning/alerts on climate.**

**Rasht Valley:** Nurobod farmers reported that they usually get information via mobile phone by friends or other farmers who live in or go to the DCM or Dushanbe. Among the information received, farmers are fully aware of market prices as aforementioned, and receive information on rainfall and natural hazards via internet or TV and radio. This information usually is spread amongst head of *jamoats* and villages, but it does not reach all farmers, especially those in the most remote areas and with lower links to markets. The information so far received by farmers is considered very valuable and no additional information, not alternative sources have been identified as useful or preferred.

In Rasht, when it comes to information, farmers get market-related information by friends or relatives in the cities, while climate related information (e.g. rainfalls, natural hazards) via internet. Radio and TV sometimes provide information too. There are other information that would be valuable if shared, namely on pests, seeds, plants diseases and any early warning system on disasters (via SMS).

Apart from information on market prices from friends and relatives in the cities, farmers of Tojikobod get news on rainfalls and natural hazards via TV and/or internet (yet considered not always reliable) and spread them among their colleagues. This information is considered very valuable and could be improved by the utilization of alert -SMS on prices and climate.

In terms of information in Laksh, market prices are available via word of mouth through friends/relatives in the cities, while information about rainfall are delivered on the TV. This information is considered valuable and would be even better if they could get daily SMS on market prices and early warning/alerts on climate.

**Khatlon & Faizobod:** Faizobod farmers reported that they usually receive market price info from the markets, and rainfall and hazards from the internet. They consider these information very valuable, but they would like to have more information on weather forecast and agricultural diseases. In addition, they would appreciate other climate services, information sharing and market prices. SMS is the most preferred channel.

In terms of information, in Muminobod, farmers get price information from the market, and for the rainfall they utilize the modern channels such as internet, radio or television. For the future investment and preparation, they would benefit from further information on price forecasting so they could plan their planting accordingly. SMS is the most preferred tool to receive information, but if not free of charge, farmers would resort to television more.

Similarly, farmers in Khovaling usually receive information via different channels: market prices through friends, while rainfall data from TV. Farmers also indicated that they would like to receive the price forecasts. This will be helpful for the farmers to make decisions for their livelihoods activities. Farmers indicated that they would prefer a mobile application for receiving climate services, information and market prices as mobiles come very handy these days.

**GBAO**: In Rushon farmers reported that they are getting information about market prices from traders and other farmers via mobile phones. The information about rainfall and weather forecasting are found in internet and TV. Regarding additional information farmers would prefer to know the type and amount of the crops in the district, to avoid high competition on the same products. Farmers would like to get the information on climate through SMS, because during the planting season they are spending more time on the farmland and mobile phone might be the best option to access the information.

Ishkoshim farmers provided similar answers. They indicated that the most valuable information is market prices, which come from friends and relatives living in the city and working in the DCM. In terms of insurance services, farmers have a lack of knowledge on possible services and no trust on the possible compensation in case of losses due to natural disaster or any other damage. The internet and TV are sources of information for farmers in Roshtqala, and farmers reported they do not need additional information.

Farmers in Shughnon are receiving information about weather forecast from the internet, TV and radio. The market prices they are getting are coming from friend and relatives via mobile phones and as an additional data farmers would prefer to get more information about hazards through the SMS. In general, local farmers are aware of insurance services, mostly livestock insurance, but the other services seem to be unknown or mistrusted by the local population.

## IMPLICATIONS

Farmers cultivate different agriculture products based on the characteristics of the livelihoods in targeted districts and the market demand. Most of the production is however used for personal consumption and only the surplus is sold in the market. Main produces of Rasht valley are potato and livestock products, and also export potato to other districts via wholesalers or truckers even though the road to Rasht may not be all smooth especially on the passage in Roghun district, but well-connected. Khatlon & Faizobod cultivates more vegetables and fruits, and farmers also have relatively easy access to the main markets in the country. GBAO area produces more livestock and farmers mainly rely on food import from other districts.

Farmers have expressed their willingness also to directly sell in the markets for higher profits rather than selling their produce to middlemen, and according to the KIs, farmers also have the access to the market entry as a seller despite some cost for the rent. Farmers groups in some districts, in particular Faizobod, have taken initiatives to establish a farmers' corner and sell their produces at cheaper prices than in the DCMs even though it is often only seasonally run. This initiative has allowed farmers to be more active in the markets; the district government appears to highly support it.

In addition, while men and women have the equal entry access to the farming and market activities (both as sellers and customers), more men were witnessed in the DCMs and the voice of women in the farming related decisions seems to be weaker than that of men. On the other hand, the role of women farmers in GBAO are relatively stronger mainly because of the higher labor migration of men to the Russian Federation. This allow women to take over the role of head of household and participate in the farming decision-making. To be noted indeed that men represent the vast majority of those forced to migrate and seek opportunities abroad. The more migration-oriented the households the higher the weight of women in decision making.

Climate change has affected the agriculture production in general. Diverse climate factors for different agriculture products have undermined the production and farmers are in need of better agricultural inputs as well as higher quality of seeds to cope with unfavorable conditions. Farmers tend to rely on climate information received through the media. They highly value this reports, along with information on markets which they are currently receiving from friends or by going directly to the market. A more systematic information system is sought by farmers who have identified mobile phone and SMS as the most preferred communication tool for market prices and early warning/alerts on climate.

# 8. Recommendation and Priorities

Market prices for food items in the main markets of the country have appeared to be highly stable and well-integrated, with Dushanbe functioning as the main hub of the supply chain in country. Nevertheless, the market prices in GBAO tend to be higher than Rasht Valley and Khatlon & Faizobod mainly due to relatively lower food self-sufficiency level and the high transportation costs. Also, food prices are slightly higher in *jamoat* shops of remote areas due to the transportation fee.

As characteristic of the livelihood in each district, farmers cultivate different varieties of agriculture produces, but a higher variety of food items is on sale in the DCMs. In the planned shift from food distribution to cash-based transfers, WFP Tajikistan CO will compensate the difficulty of finding fortified food commodities (wheat, vegetable oil) by adding vegetable items into the food basket. Following the Omega analysis, all micro-nutrients will be thus adequately included in the reference food basket.

It is also critical to note that shortage of cash, especially after the recent economic shock, has mined the livelihoods of many people and posed challenges to the actors in the market as well as to local farmers. Cash intervention may thus compensate the reduce cash flow in the targeted areas due to the Russian economic crisis and rehabilitate some of the market dynamics in the country. Key informants and retailers indeed reported that markets are driven by supply and demand and that once demand increases, markets are capable of responding to meet the increased demand. On the other hand, farmers have expressed their need of credit services. There is therefore a chance for people to allocate part of the given transfer to farming inputs. However, as CBT programme targets the most vulnerable population, whose share of expenditure on food is usually high, there is sufficient reason to believe the cash-based transfers will be utilize to meet the food requirements of beneficiary households. Voucher is also a viable option, with retailers willing to participate to a voucher progamme. Nevertheless cash modality is preferred given the low amount of beneficiaries involved in WFP programmes compared to the total population as well as the lighter procedures needed to implement a cash programme. Also to note, in order to confirm the possibility of cash-based transfer modalities, supply chain assessment is further required.

In addition, in order to better connect farmers to markets, the role of farmers associations can be critical. During the assessment, the associations showed high margins of improvement, not in terms of the size of the groups, but rather for the limited range of responsibilities or services they currently provide to their members. Recently, in some districts, as a good practice, an initiative for farmers' corners has been promoted. This not only provides a higher market accessibility for farmers as sellers but also lower prices to consumers.

Based on the Market Environment Assessment, all eleven districts are considered to be ready and equipped to receive cash-based transfer programmes. Given specific gender issues encountered in the visited areas, it is recommended to pay specific attention to gender balance in CBT household targeting.

In Tajikistan, the major driving factors for the market functionality and food supplies in the targeted districts are the road condition and the physical access to the markets, also reflected in the price data and integration of markets. All markets in the targeted districts are well-connected, but considering the road condition, the shock response capacity and timeliness and the price data, a prioritization for CBT programme implementation is recommended, as below. Annexes B1, B2 and B3 provide details on the prioritization.

**Table 4: Recommended Prioritization of Districts for CBT**

| Prioritization | Area | District |
|---|---|---|
| 1 | Khatlon & Faizobod | Faizobod |
| 2 | | Muminobod |
| 3 | | Khovaling |
| 4 | Rasht Valley | Rasht |
| 5 | | Tojikobod |
| 6 | | Nurobod |
| 7 | | Laksh |
| 8 | GBAO | Shughnon |
| 9 | | Roshtqala |
| 10 | | Rushon |
| 11 | | Ishkoshim |

# Highlights

**Rasht Valley**

- In Rasht Valley markets are generally well functioning and developed, with district central markets and several shops spread in the whole valley.
- The market integration of the Rasht Valley with the rest of the country is high all year around for the main commodities. Lower integration is found for carrots, onions and rice without particular seasonal peaks.
- Road conditions are good. The full valley is connected with a main paved road. It is thus likely that disruption of supply chain due to natural hazard will affect the four districts equally. The only non-paved portion of the main street is before Nurobod. Nevertheless all informants reported that in 1-2 days the situation usually gets back to normal.
- The government is monitoring all prices in the country and tries to fill the gaps in the market at national level by providing deficit zones with food from surplus areas and better coordinate the production. Market integration is thus incentivized.
- The crisis in Russia is causing less purchasing power for the households who rely on remittances and thus negatively affecting sale prices given the reduced demand. Given the import dependency on some products, should the TJS devaluates further against RR or USD, this will impact prices of imported food and make the food basket more expensive.
- In the full region there is only one harvest per year, and if a natural disaster hits the district, it would take one year to restore the supply of locally produced food and in the meanwhile import dependency would thus have to increase.
- Alongside the regular shops, the role of truckers in the Rasht valley is significant as they deliver and sell food commodities that are relatively scarce in the remote areas.
- Lack of storage, limited capital and volatile demand were reported as main constrains for traders.
- Food availability is high in all districts and even in remote *jamoats*, where prices are in line with the district centers. Traders cover most of the area and farmers are well connected to markets. The more the area is remote the more farmers rely on own production for meat, vegetables and fruits.
- Farmers in Rasht valley are concerned mostly about pests and seeds quality. The high cost of chemicals and the high competition due to the recent increase of the market integration is also constraining them.
- The lack of credit and insurance is considered a critical issue for farmers.
- Weather has been slightly changing in the last few years. Extreme temperatures have caused frost and heat waves that have directly or indirectly (diseases) damaged the harvest
- Gender-wise, both in trading and farming women are generally considered a valuable asset. Nevertheless, despite intentions of respondents, the mission noticed that decision making is mainly in the hands of men and women face bigger challenges than men in entering the market and in the farms.

## Khatlon & Faizobod

- In Faizobod, Muminobod and Khovaling, markets are well-functioning and developed, with district central markets and jamoat shops well spread for people to access.
- Well-paved roads from Dushanbe to Faizobod, Muminobod and Khovaling facilitate market integration and allow people to have better physical access to the market.
- With geographical closeness to Dushanbe, Faizobod have benefited the easy access for the food supply. Muminobod and Khovaling are well connected to Kurgan Tyube and Kulob, from and to which food commodities also flow.
- Food availability is high in all districts. Even though prices are slightly higher in the remote areas due to transportation costs and traders mark-up, markets are relatively well integrated.
- District government plays a monitoring role on prices and organizes monthly food exhibition; Tojikmatlubot shop was found in Khovaling DCM.
- Lack of adequate own money for trading, high level of insecurity and few people controlling the market are the major challenges for retailers.
- Markets appear to have the capacity to meet an increased demand within a short period of time.
- Due to seasonal effect, the food prices are anticipated to increase in the coming six months.
- Farmers' access to market as seller might be limited due to the time management with farming. The cost of traders margin is indeed comparatively lower than the cost of going to sell in the market.
- Credit has been actively used to purchase food items in district center markets and jamoat shops. Credit is considered a critical issue for farmers, while insurance has not been in use by farmers due to the lack of trust.
- Farmers' private warehouse is the most common way of storing food items.
- Mobile has been identified as the most preferred tool for farmers to receive relevant information.
- Gender-wise, both in trading and farming men and women have the equal entrance access to the markets both as buyers and sellers. It is also claimed that both men and women take part in farming decision-making, but the women's voice is likely to be less influential.

## GBAO

- In GBAO markets are functioning well, with district central markets and several shops spread in the areas.
- The level of market integration in GBAO is high and mostly for the imported products from outside the district as a wheat flour, sugar, vegetables, cotton oil, sugar and pulses.
- Road conditions are not good enough compared to other regions and accessibility of some jamoats are poor with unserved areas since the Soviet Union time. However, districts are connected with a main paved road affecting by seasonal natural disasters the four districts equally, which rehabilitation usually takes less than one week.
- The government is monitoring markets, trying to stabilize prices with provision of main staple production and organizing exhibitions of the produces at relatively lower prices.
- Due to the crisis in Russia, the households who rely on remittances have lower purchasing power. This has a secondary impact on sale prices given the seasonally reduced demand.
- The region itself has the lowest access to farmland in Tajikistan and is highly dependent on national and international imports. Most of the farmers harvest for their own consumption and the few who have a surplus manage to sell it in the market.
- In general, the food availability is high in all districts, but compared to other regions, the market prices are higher due to the transportation cost and higher margin level for vegetables.
- The large companies delivering NFIs from China pass all districts on the way to Dushanbe and Khatlon region and on the way back they supply food to GBAO.
- Farmers are concerned mostly about seeds and fertilizers quality. The high cost of fertilizers and fuel affects the price of agriculture production which is getting less competitive with imported production from other districts.
- The primary sources of information are internet and TV. SMS was identified as the most preferred channel for farmers to receive relevant information.
- Most of the warehouses are private and farmers store seeds and food items at home.
- The precipitation pattern is changing slightly by having more rainfalls instead of snow, whose accumulation and melting allowed for better irrigation during the summer.
- Gender-wise, generally men and women have equal access to trading and farming in GBAO.

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# Annexes

## ANNEX A.1 Food Price Range in Rasht Valley (As of November 2016)

| Food Item | Average | Minimum | Maximum | Price in Dushanbe (October 2016) |
|---|---|---|---|---|
| **Meat-mutton** | 27.75 | 23.0 | 30.0 | 33.13 |
| **Meat-beef** | 28.57 | 26.0 | 30.0 | 32.48 |
| **Chicken** | 13.20 | 12.0 | 14.0 | 12.85 |
| **Sugar** | 7.06 | 6.8 | 7.3 | 6.90 |
| **Potato** | 1.2 | 0.8 | 2.0 | 1.80 |
| **Cabbage** | 2.13 | 1.5 | 3.0 | 2.15 |
| **Carrots** | 1.46 | 1.2 | 1.8 | 1.90 |
| **Salt** | 0.81 | 0.5 | 1.0 | 1.00 |
| **Rice** | 7.54 | 6.8 | 8.0 | 10.08 |
| **Wheat flour high quality** | 3.4 | 3.2 | 3.6 | 3.58 |
| **Wheat flour first grade** | 3.08 | 3.0 | 3.3 | 3.31 |
| **Wheat flour local produce** | 2.75 | 2.5 | 3.0 | 2.80 |
| **Vegetable oil** | 10.84 | 10.0 | 11.5 | 12.75 |
| **Cotton oil** | 9.63 | 8.0 | 11.0 | 9.25 |
| **Onion** | 1.50 | 1.0 | 2.0 | 1.64 |
| **Pulses (haricot bean)** | 9.67 | 6.0 | 15.0 | 6.95 |
| **Pulses (chick peas)** | 10.71 | 6.0 | 15.0 | 10.48 |
| **Milk** | 3.57 | 2.3 | 5.0 | 4.88 |
| **Eggs** | 0.88 | 0.8 | 1.0 | 0.86 |
| **Tomato** | 4.95 | 3.0 | 6.8 | - |

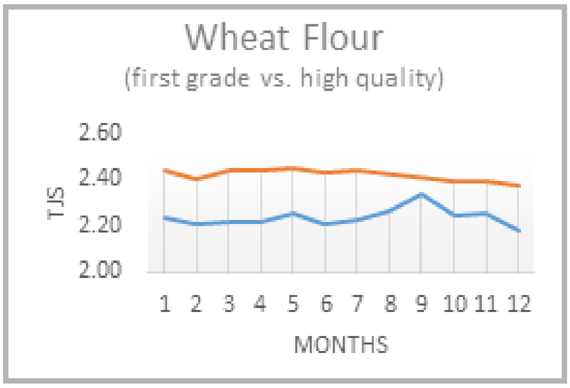
## ANNEX A.2 Food Prices in Khatlon and Faizobod (as of November 2016)

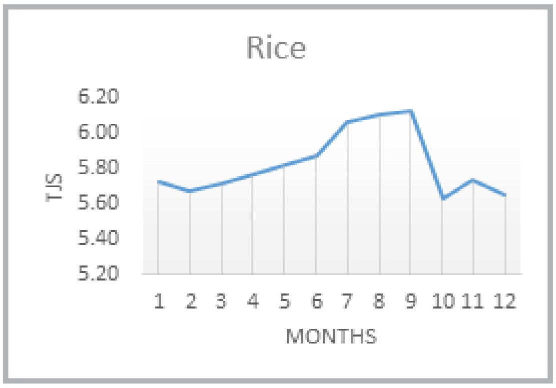
| Food Item | Average | Minimum | Maximum | Price in Dushanbe (October 2016) |
|---|---|---|---|---|
| **Meat-mutton** | 30.00 | 28.00 | 35.00 | 33.13 |
| **Meat-beef** | 28.00 | 25.00 | 32.00 | 32.48 |
| **Chicken** | 14.17 | 13.00 | 15.00 | 12.85 |
| **Sugar** | 6.97 | 6.70 | 7.00 | 6.90 |
| **Potato** | 1.83 | 1.00 | 2.50 | 1.80 |
| **Cabbage** | 2.06 | 1.00 | 4.00 | 2.15 |
| **Carrots** | 1.23 | 1.00 | 1.50 | 1.90 |
| **Salt** | 0.82 | 0.50 | 1.00 | 1.00 |
| **Rice** | 7.22 | 6.00 | 9.00 | 10.08 |
| **Wheat flour high quality** | 3.36 | 3.20 | 3.50 | 3.58 |
| **Wheat flour first grade** | 3.09 | 2.90 | 3.50 | 3.31 |
| **Wheat flour local produce** | 2.66 | 2.29 | 2.90 | 2.80 |
| **Vegetable oil** | 11.11 | 10.00 | 12.00 | 12.75 |
| **Cotton oil** | 9.96 | 9.60 | 10.00 | 9.25 |
| **Onion** | 1.27 | 1.00 | 1.50 | 1.64 |
| **Pulses (haricot bean)** | 8.00 | 6.00 | 10.00 | 6.95 |
| **Pulses (chick peas)** | 9.00 | 6.00 | 15.00 | 10.48 |
| **Milk** | 2.80 | 2.00 | 3.00 | 4.88 |
| **Eggs** | 0.92 | 0.90 | 1.00 | 0.86 |
| **Tomato** | 3.88 | 3.00 | 6.00 | - |

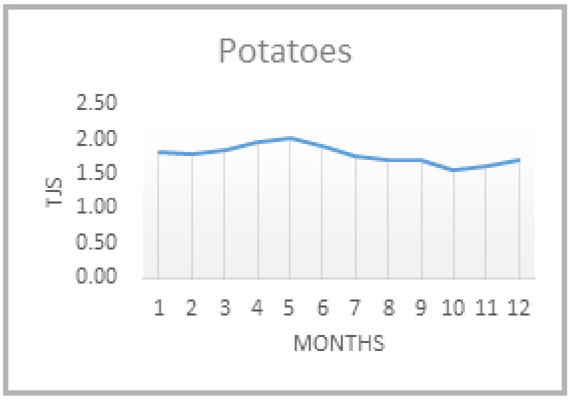
## ANNEX A.2 Food Prices in GBAO (as of November 2016)

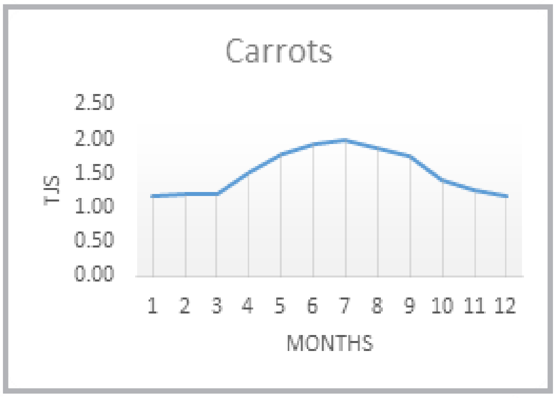
| Food Item | Average | Minimum | Maxi-mum | Price in Du-shanbe (October 2016) |
|---|---|---|---|---|
| **Meat-mutton** | 29.45 | 25.00 | 32.00 | 33.13 |
| **Meat-beef** | 28.15 | 25.00 | 30.00 | 32.48 |
| **Chicken** | 16.32 | 14.00 | 20.00 | 12.85 |
| **Sugar** | 8.17 | 7.00 | 9.00 | 6.90 |
| **Potato** | 2.76 | 2.00 | 3.00 | 1.80 |
| **Cabbage** | 2.80 | 1.80 | 3.50 | 2.15 |
| **Carrots** | 2.81 | 1.50 | 4.00 | 1.90 |
| **Salt** | 1.76 | 1.00 | 3.00 | 1.00 |
| **Rice** | 9.10 | 7.00 | 12.00 | 10.08 |
| **Wheat flour high quality** | 4.06 | 3.30 | 6.00 | 3.58 |
| **Wheat flour first grade** | 3.46 | 3.00 | 4.00 | 3.31 |
| **Wheat flour local produce** | 3.13 | 2.80 | 3.40 | 2.80 |
| **Vegetable oil** | 13.62 | 12.00 | 16.00 | 12.75 |
| **Cotton oil** | 12.67 | 11.00 | 16.00 | 9.25 |
| **Onion** | 2.76 | 2.00 | 3.00 | 1.64 |
| **Pulses (haricot bean)** | 10.10 | 8.00 | 12.00 | 6.95 |
| **Pulses (chick peas)** | 8.83 | 6.00 | 20.00 | 10.48 |
| **Milk** | 4.23 | 1.00 | 5.00 | 4.88 |
| **Milk (powder)** | 33.71 | 28.00 | 40.00 | - |
| **Eggs** | 1.14 | 1.00 | 2.00 | 0.86 |
| **Tomato** | 8.86 | 5.00 | 20.00 | - |

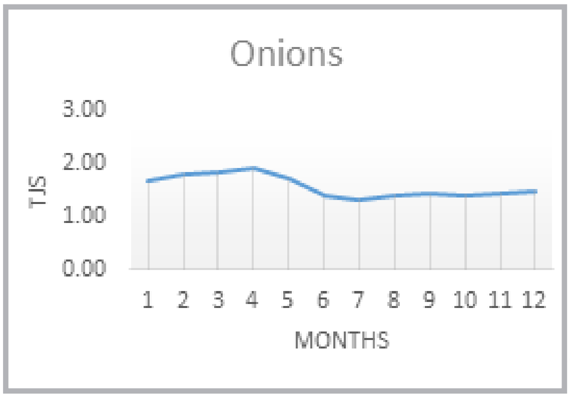
## ANNEX A.4 SEASONALITY OF FOOD PRICES (2011-2016)

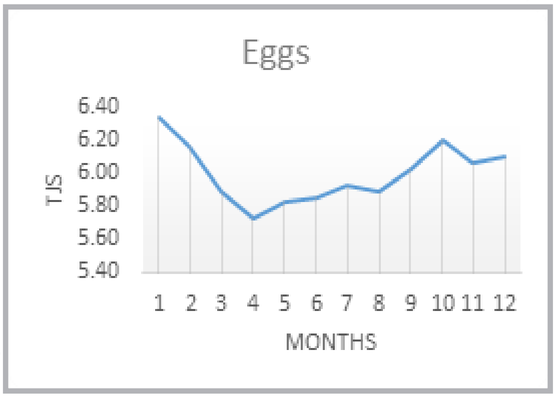


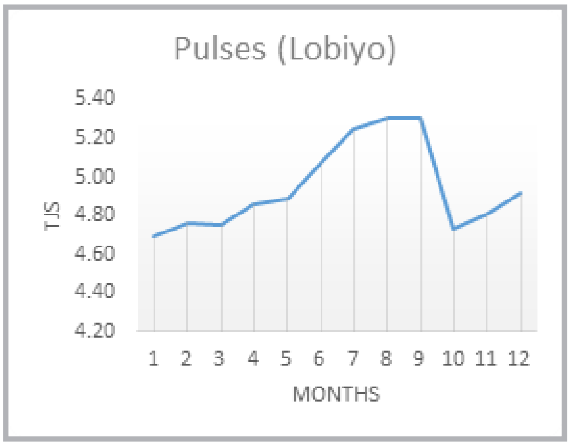



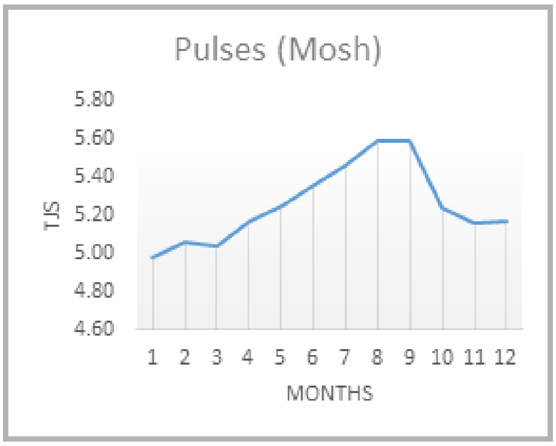



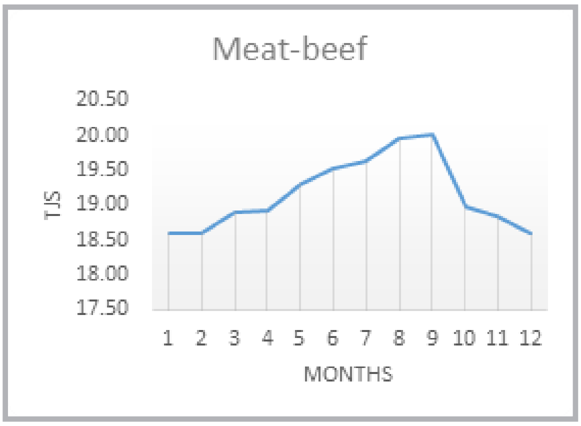



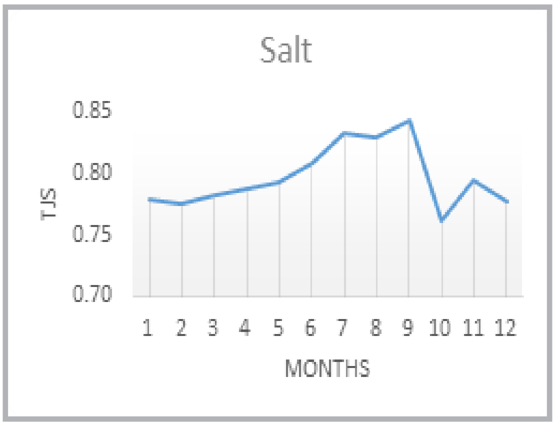



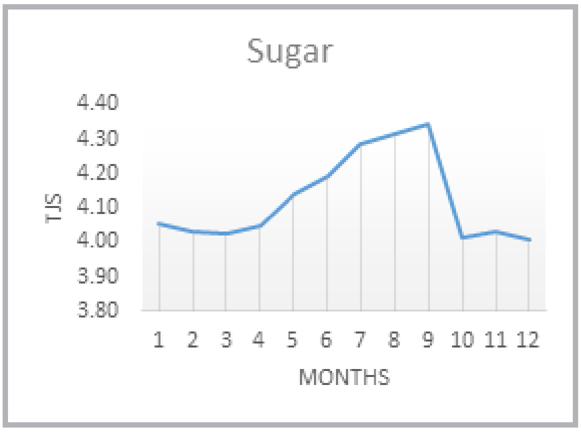



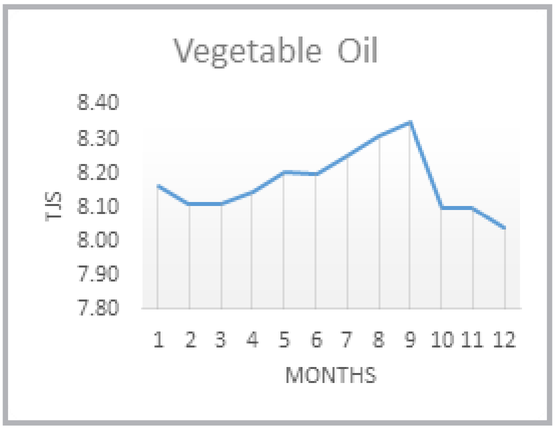




Meat-beef
20.50
20.00
19.50
19.00
18.50
18.00
17.50
TJS
1 2 3 4 5 6 7 8 9 10 11 12
MONTHS


Salt
0.85
0.80
0.75
0.70
TJS
1 2 3 4 5 6 7 8 9 10 11 12
MONTHS


Sugar
4.40
4.30
4.20
4.10
4.00
3.90
3.80
TJS
1 2 3 4 5 6 7 8 9 10 11 12
MONTHS


Vegetable Oil
8.40
8.30
8.20
8.10
8.00
7.90
7.80
TJS
1 2 3 4 5 6 7 8 9 10 11 12
MONTHS

## ANNEX B.1 Summary of KI and Trader Interviews: Rasht Valley

| Agenda | Source | Nurobod | Rasht | Tojikobod | Laksh |
|---|---|---|---|---|---|
| Food Source | KIs | • Own production | • Own production<br>• From wholesaler in other districts<br>• Purchase from independent van | • Own production<br>• From wholesaler of same governorates<br>• From independent van | • From wholesaler from the same district and other districts |
| Food Availability | Traders | • Diverse food items were found in the DCM. | • Diverse food items were found in the DCM.<br>• Limited food items were found in the shops of the remote areas. | • Diverse food items found in the DCM.<br>• Limited food found in the shops of the remote areas but villagers may buy food products from neighbors or from DCM. | • Diverse food items were found in the DCM.<br>• A big sized shop with food items was found in a remote area. |
| Who controls the market | KIs | • Farmers<br>• Retailers | • Government / local authorities<br>• Demand | • Demand | • Farmers<br>• Retailers<br>• Wholesalers<br>• Demand |
| Trader's characteristics | Traders | • Small shops are witnessed in the DCM<br>• Electricity is limited in the DCM. | • DCM is open every day, some shops open six days/week.<br>• Electricity is most of time available in the DCM.<br>• Large shops are available, along with small and medium sized shops in DCM. | • DCM opens six days/week<br>• Electricity is sometimes available.<br>• Large shops are available, along with small and medium sized shops. | • DCM opens every day<br>• DCM is private<br>• Small-medium sellers outside the DCM along with mini-vans or trucks.<br>• Big shops found in remote area near Kyrgyz |
| Main Risks to the markets | KIs | • No money/ limited access to credit | • Government intervention | • No money/limited access to credit<br>• Limited demand | • No money/ limited access to credit<br>• Distance |
| Response Capacity | Traders / KIs | • Lack of own capital has been a challenge Within a week, 40~50% increase | • Lack of capital, and low profit margin is a challenge<br>• Within a week, up to a 50% increase of demand may be met (In the case of natural disasters, it takes a year for the full recovery) | • Lack of credit has been a challenge in the sales activity.<br>• Within a week, up to a 100% increase (depending on the season). | • Lack of credit has been a challenge in the sales activity.<br>• Within a week, 40~50% increase of demand may be met. |
| Food storage method | KIs | • Renting common silos<br>• Farmer's private warehouse | • Farmer's private warehouse | • Renting common silos | • Farmer's private warehouse |
| Debt/Credit | Trader | Credit available in DCM. | Credit is available in the DCM and *jamoats* | Credit is available in the DCM. | Credit available in DCM. |
| Gender difference for the entrance to the market | KIs | Equal, but limited in practice for physical needs of the sector | Equal, but limited in practice for cultural acceptance and for the characteristics of the sector | Equal, but it may be limited in practice for the characteristics of the sector | Equal |
| Willingness to join voucher programme | Retailers | Yes | Yes | Yes | Yes |

## ANNEX B.2 SUMMARY OF KI AND TRADER INTERVIEWS: KHATLON & FAIZOBOD

| Agenda | Source | Faizobod | Khovaling | Muminobod |
|---|---|---|---|---|
| Food Source | KIs | • Own Production<br>• From wholesalers from other districts; Dushanbe | • Own Production<br>• From wholesaler from other districts; Kurgan Tyube and Kulob | • Own Production<br>• From wholesalers from other districts; Kurgan Tyube, Kulob and Dushanbe |
| Food Availability | Traders | • Diverse food items were found in the DCM; milk and tomato are seasonally available<br>• Less diverse food items were on display in *jamoat* shops; chicken, pulses and milk are sporadically available. | • Diverse food items were found in the DCM | • Diverse food items were found in the DCM |
| Who controls the market | KIs | • Demand-driven | • Demand-driven<br>• Government plans a monitoring role on the market prices | • Demand-driven<br>• Government plays a monitoring role on the market price |
| Trader's characteristics | Traders | • Small-sized shops are available in the DCM.<br>• Medium-sized shops are available in *jamoats*.<br>• Electricity available all the time in some DCM shops; Electricity available most of time or sometimes in *jamoat* shops | • From small-sized to big-sized shops are available in the DCM<br>• Small and medium sized shops are available in *jamoats*.<br>• Electricity available every day but limited in *jamoat* shops | • From small-sized to big-sized shops are available in the DCM.<br>• Medium shops are available in *jamoats*.<br>• Electricity sometimes available |
| Main Risks to the markets | KIs | • Low local supply due to bad harvest/climate | • No major ones identified; | • Low local supply due to bad harvest/climate<br>• No money/ limited access to credit for farmers |
| Response Capacity | Traders / KIs | • According to KI, the market can meet a 100 percent of demand increase within a week.<br>• While trader in the DCM responded that they may meet a 100 percent of demand within two weeks, traders in *jamoat* shops may meet the demand within a week. | • According to KI and retailers in DCM and *jamoat* shops, the market can meet a 100 percent of demand increase within a week. | • According to KI, the market can meet a 20~30 percent of demand increase within a week. |
| Food storage method | KIs | • Farmers' private warehouse | • Common silos available, but farmers' private warehouse is preferred. | • Farmers' private warehouse<br>• Middlemen's storage |
| Debt/Credit | Trader | Credit use is available both in the DCM and *jamoat* shops. The percentage of the monthly sales they sell on credit is higher in *jamoat* shops than DCM. | Credit use is available both in the DCM and *jamoat* shops. | Credit use is available both in the DCM and *jamoat* shops. |
| Gender difference for the entrance to the market | KIs | Equal | Equal | Equal |
| Willingness to join voucher programme | Retailers | Yes | Yes | Yes |

## ANNEX B.3 Summary of KI and Trader Interviews: GBAO

| Agenda | Source | Rushon | Shughnon | Roshtqala | Ishkhoshim |
|---|---|---|---|---|---|
| Food Source | KIs | • From wholesaler in other districts<br>• Own Production | • From wholesalers from other governorates | • From wholesalers of the same district and other regions<br>• Own production 20% | • Purchase from independent van<br>• From wholesalers from other districts<br>• Own Production |
| Food Availability | Traders | • Diverse food items found in the DCM.<br>• Less food items displayed in the *jamoat* shops: potato and carrot seasonally available.<br>• Limited food items in the shops of the remote areas. | • Diverse food items were found in the DCM.<br>• Less food items were found in the shops of the remote areas. | • Diverse food items were found in the DCM.<br>• Less diverse food items in *jamoat* shops:<br>• meats, chicken, milk and eggs sporadically available; no vegetables. | • Diverse food items were found in the DCM.<br>• Less diverse food items on display in *jamoat* shops; meat, chicken and milk sporadically available, but villagers buy from neighbors or DCM. |
| Who controls the market | KIs | • Demand<br>• State Reserve Agency is regulating prices | • Wholesalers<br>• Demand | • Demand | • Farmers<br>• Retailers<br>• Wholesalers<br>• Demand |
| Trader's characteristics | Traders | • DCM open six days per week; shops open six days/week<br>• Big and medium shops available in DCM and *jamoats*, larger warehouses in the central shops.<br>• Electricity available most of the time in DCM and *jamoat* shops, except some shops in Bartang. | • DCM open every day, as well as most shops<br>• Large, medium and small shops available in DCM<br>• Independent trucks inside the market and alongside the main road. | • DCM open every day; some *jamoat* shops open six days/ week.<br>• Small shops available in the DCM; medium shops along the main road.<br>• Small and medium shops in *jamoats*.<br>• Electricity available every day in DCM and *jamoat* shops. | • DCM and shops are open every day<br>• Medium to big shops available in the DCM<br>• Big and medium shops available in *jamoats* too, but warehouse size is different.<br>• Electricity available every day in DCM and *jamoat* shops. |
| Main Risks to the markets | KIs | • Low local supply due to bad harvest/ climate<br>• No money/ limited access to credit<br>• Limited demand<br>• Road Conditions | • Unreliable supply of goods<br>• Distance<br>• Road Conditions | • Low local supply due to bad harvest/ climate<br>• Limited demand (lack of purchase power)<br>• Distance | • Road Conditions<br>• Distance |
| Response Capacity | Traders / KIs | • Lack of own capital is a challenge<br>• Within a week, 30% increase | • Lack of credit is a challenge<br>• Within a week, 50% increase | • Within a week, 70% increase, if the trader has turnover | • Within a week, 100% increase |
| Food storage method | KIs | • Renting common silos<br>• Private warehouses | • Farmer's private warehouse | • Farmer's private warehouse | • Farmer's private warehouse |
| Debt/Credit | Trader | Credit available in the DCM and *jamoat* shops. | Credit less available in the DCM than in *jamoat* shops. | Credit available in the DCM and *jamoat* shops, the share is around 30% | Credit available in the DCM and *jamoat* shops, the average percentage of the loans is 25%. |
| Gender difference for the entrance to the market | KIs | Equal. More women sellers | Equal. Many women are in the trading, men left for labor migration | Equal. Many women are in the trading, men left for labor migration | Equal |
| Willingness to join voucher programme | Retailers | Yes | Yes | Yes | Yes |

## ANNEX C.1 Summary of Farmers FGDs: Rasht Valley

| Districts | Main products | Other products to cultivate if demand exists | 2 main challenges | Weather/climate hazards | Where do you sell your products | Selling Strategies | Info Received (source) | Preferred info distribution channel | Access to Insurance | Access to Credit | % of women farmers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Nurobod** | •Potato<br>•Wheat<br>•Fruits | •N/A | •High costs of agricultural inputs<br>•Changing climate/ new seasons | •Frost,<br>•Extreme weather,<br>•Mudflows,<br>•Floods | •Markets in the Region and Dushanbe | •Sell right after harvest | Market prices (friends and local authorities) | - | Yes | No | 0% |
| **Rasht** | •Potato<br>•Fruits<br>•Honey<br>•Livestock | •Nuts<br>•Marsa oil<br>•Pulses | •Changing climate/ New seasons<br>•High quality fertilizer and farming skills | •Frost,<br>•Heavy rain,<br>•Floods,<br>•Extreme weather | •Markets in the Region and Dushanbe | •Sell right after harvest or store until price is more convenient | •Market prices (friends)<br>•Rainfall (internet) Hazards (CoES, local authorities) | SMS | Yes | No | 20% |
| **Tojikobod** | •Potato<br>•Apple<br>•Fruits | •Carrots<br>•Onions<br>•Peanuts | •No/Little storage capacity<br>•High costs of agricultural inputs | •Heavy rain, frost,<br>•High temperature | •Markets in the district, region and Dushanbe | •Sell right after harvest | •Market prices (internet, TV)<br>•Hazards (internet, TV) Rainfall (internet, TV) | SMS | Yes | Yes, from family and friends | - |
| **Laksh** | •Potato<br>•Meat<br>•Vegetable | •Redroots<br>•Wheat<br>•Wool | •No/Little storage capacity<br>•High costs of agricultural inputs | •Heavy rain,<br>•Frost,<br>•Hail | •Markets in the district, region, Dushanbe and Kyrgyzstan | •Sell right after harvest | •Market prices (TV)<br>Rainfall (TV) | SMS | Yes | Yes, from family, friends and traders | 70% |

## ANNEX C.2 Summary of Farmers FGDs: Khatlon & Faziobod

| Districts | Main products | Other products to cultivate if demand exists | 2 main challenges | Weather/ climate hazards | Where do you sell your products | Selling Strategies | Info Received (source) | Preferred info distribution channel | Access to Insurance | Access to Credit | % of women farmers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Faizobod** | • Tomato<br>• Apple<br>• Potato | • Maize<br>• Wheat<br>• Pulses<br>• Fruits | • Seasonal Change<br>• No/Little storage capacity | • High temperature, dust, and heavy rain | • Markets in the district and in the region | • In case of tomato, Selling right after harvest<br>• In case of apples, storing until price is more convenient | • Market prices (market)<br>• Rainfall & Hazards (internet) | SMS | Yes, but not in use | Yes, from bank | 50% |
| **Khovaling** | • Wheat<br>• Livestock<br>• Fruits | • Potato<br>• Tomato<br>• Cucumber | • Changing Climate<br>• Market controlled by middlemen | • High temperature, dust, and heavy rain | • Markets in the district or in the region (Sughd, Kurgan Tyube, and Kulob) | • Selling right after harvest | • Market Prices (friends)<br>• Rainfall (TV) | Mobile App/ TV/ Newspaper | Yes but not in use | Yes with high interest rates / No | 40% |
| **Muminobod** | • Wheat<br>• Potato<br>• vegetables | • Fruits (dried)<br>• Vegetables | • Changing climate/ New Season<br>• High costs of agricultural inputs | • High temperature, dust, and heavy rain | • Market in the district/ region (Kurgan Tyube and Kulob) | • Sell right after harvest | • Market prices (market)<br>• Rainfall (internet, radio, TV) | SMS/ TV | Yes, but not in use | No | 70% |

## ANNEX C.3 SUMMARY OF FARMERS FGDS: GBAO

| Districts | Main products | Other products to cultivate if demand exists | 2 main challenges | Weather/ climate hazards | Where do you sell your products | Selling Strategies | Info Received (source) | Preferred info distribution channel | Access to Insurance | Access to Credit | % of women farmers |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Rushon** | • Potato<br>• Wheat<br>• Vegetables | • Maize<br>• | • High costs of agricultural inputs<br>• No/Little storage capacity | • Drought (lack of snow accumulation), landslides, mudflows | • Market in the District and regional market | • Store until price is more convenient | • Market Prices (traders/ farmers)<br>• Rainfall/ Weather forecast (internet)/ TV) | SMS | Yes, but don't trust | Yes with high interest rates/ No | 50% |
| **Shughnon** | • Potato<br>• Cereals<br>• Vegetables<br>• Fruits | • Tomato<br>• Cucumber<br>• Cabbage | • No/Little storage capacity<br>• High costs of agricultural inputs | • Heavy rain, frost, Less snow | • Markets in the region (Khorog) | • Store until price is more convenient | • Weather forecast (TV) Market prices (family and friends) | SMS, Radio | Yes | Yes | 20% |
| **Roshtqala** | • Potato<br>• Fodder<br>• Livestock | • Livestock | • High costs of agricultural inputs<br>• High cost of fertilizers | • The weather fluctuation during the sowing season,<br>• More agriculture diseases | • Market in the District or to regional markets. | • Sell right after harvest | • Market prices Family and Friends and relatives Weather forecast TV | - | Yes | Yes, from family and friends | 70% |
| **Ishkhoshim** | • Wheat<br>• Vegetables<br>• Fruits | • Potato | • Changing climate/ New seasons<br>• High costs of agricultural inputs<br>• | • The wind erosion, frost | • Market in the District or to regional markets. | • Store until price is more convenient | • Market prices (family and friends,)<br>• Weather forecast (internet, TV) | TV, SMS | Yes, but have lack of awareness, mistrust | Yes with high interest rates/ No | 50% |

# ANNEX D.1 QUESTIONNAIRE FOR KEY INFORMANTS

**CONSENT:**

My name is **[Enumerator's name].** WFP is collecting market information from key informants in (**AREA)** in Tajikistan. We would like to ask you some questions about the local markets in your district. The purpose of collecting this information is to support WFP's operational planning and decisions regarding its market based intervention to assist the most vulnerable population in the country. The survey usually takes 30 minutes to complete. Any information that you provide will **only be used by WFP** and are **not subject to disclosure**. Your participation is voluntary. We need your **genuine responses** and hope that you agree to participate.

| Section 1: General/geographic Information | | | | | |
|---|---|---|---|---|---|
| 1.1 | Name of interviewer | | | | |
| 1.2 | Date of interview | [__[__]/[__[__]/2016<br>Day Month | | | |
| 1.3 | Market name | | | | |
| 1.4 | City/Village name | | | Code: | [__] [__] |
| 1.5 | District name | | | Code: | [__] [__] |
| 1.6 | Province/Region | | | Code: | [__] [__] |
| 1.7 a | Geographic coordinate (Latitude) | North (N) | 1.7a1[__[__]º | 1.7a2[__[__]’ | 1.7a3 [__[__].[__]” |
| 1.7 b | Geographic coordinate (Longitude) | East (E) | 1.7b1[__[__]º | 1.7b2[__[__]’ | 1.7b3 [__[__].[__]” |

| Section 2 | | | |
|---|---|---|---|
| 2.1 | How is the market working in your district? | | |
| 2.2 | What do you consider to be the main risks affecting the market in your district? | | Insecurity and looting<br>Low local supply due to bad harvest/climate<br>Loss of goods through robbery<br>No money/ limited access to credit<br>Unreliable supply of goods<br>Low profit margin<br>Limited demand<br>Few people are controlling the market<br>Government's interventions (e.g. restriction)<br>Distance<br>Road Conditions<br>Others (______________________) |
| 2.3 | Please tell us the names of main district markets from where fresh produce (vegetable, fruit) reaches the end users | | |

| Section 3: Market Supply Chain | | | |
|---|---|---|---|
| 3.1 | What are the two most important supply sources of local food? | [__] | Own Production<br>From wholesaler from same governorates<br>Purchase directly from farmers<br>From wholesaler from other governorates<br>Purchase from independent van<br>Purchase directly from local factories |
| 3.2 | Can you provide the names, address, telephone of few big suppliers of food commodities you are in contact? | a) First Name ______________<br>b) Last Name ______________<br>c) Address ________________<br>d) Telephone ______________ | |
| 3.4 | Does your district usually face problems in getting your food supplies whether imported or locally produced? | \|__\| | 1) Yes, imported and local<br>2) Yes, imported<br>3) Yes, local<br>4) No |
| 3.5 | If yes, which are the most significant problems you face: | \|__\| | Procedures to cross the border;<br>Opening hours to cross are too limited;<br>Taxation is too high;<br>Transportation costs are too high;<br>Local production is not reliable;<br>Unavailable or limited official credit services (through banks)<br>Gender discrimination<br>Road status/Seasonal disruption<br>Other specify: ---------------------------- |
| 3.7 | What percentage of the wheat flour in the market is fortified? | \|__\|\|__\|\|__\|% | |
| 3.8a | Would the markets in your district be able to absorb an increased demand? | \|__\| | No<br>Yes, within a week<br>Yes, within two weeks<br>Yes, within a month<br>Yes, within more than one month<br>No answer |
| 3.8b | If yes, by what percentage? | \|__\|\|__\|\|__\|% | 0~100% |
| 3.9 | What is the normal margin level at any levels? Any examples? | | |
| 3.10 | What is the normal way of storing food items? | | 1) Renting common silos (e.g. farmer association, cooperative, etc.)<br>2) free common silos (public)<br>3) middle men storage<br>4) farmer's private warehouse<br>5) don't store |

| | | | |
|---|---|---|---|
| **Section 4: Monopoly** | | | |
| 4.1 | Who controls the market? (Open questions) | | 1) farmers<br>2) retailers<br>3) wholesalers<br>4) transportation companies<br>5) storage companies<br>6) government/ local authorities<br>7) head of market<br>8) demand |
| 4.2 | How? | | |

| | | | |
|---|---|---|---|
| **Section 5: Prices** | | | |
| 5.1 | In your opinion, would the sale price of food items in the market decrease, remain the same or increase in the coming six months? | \|__\|\|__\|\|__\|% | |
| 5.2 | If there will be an increase or a decrease in sales prices, what would be the main reason for this? [circle one of the numbers] | \|__\| | Bad harvest<br>(Good) harvest<br>More imports / inflows from surplus zones<br>Less imports / inflows from surplus zones<br>More exports / outflows<br>Less exports / outflows<br>Seasonality<br>Other (specify____________________)<br>No answer |

| | | | |
|---|---|---|---|
| **Section 6: Gender** | | | |
| 6.1 | Is entrance to the market for men and women the same? | | 1) Yes<br>2) No, depending on supply chain level (e.g. retailers, wholesalers, middlemen, etc.)<br>3) No, harder for women<br>4) No, harder for men |
| 6.2 | If no, why? | | 1) Security<br>2) Cultural Acceptance<br>3) For the characteristics of the sector; male-dominant |
| 6.3 | Who decides how much of your generated income will be spent on food for your household most of the time? | | 1) Self<br>2) Partner/spouse<br>3) Other household member<br>4) Self and other household member(s)<br>5) Partner/spouse and other household member(s)<br>6) Someone (or group of people) out-side the household<br>7) Others |

## ANNEX D.2 Questionnaire for Traders

**CONSENT**

My name is **[Enumerator's name].** WFP is collecting market information from retailers in (**AREA**) in Tajikistan. We would like to ask you some questions about your trade/business. The purpose of collecting this information is to support WFP's operational planning and decisions regarding its market based intervention to assist the most vulnerable population in the country. The survey usually takes 30 minutes to complete. Any information that you provide will **only be**

| Section 1: General/geographic Information | | |
|---|---|---|
| 1.1 | Name of interviewer | |
| 1.2 | Date of interview | [__[__]/[__[__]/2016<br>Day Month |
| 1.3 | Market name | |
| 1.4 | Jamoat name | |
| 1.5 | District name | |
| 1.6 | Province/Region | |

| Section 2: Trader's basic characteristics | | | |
|---|---|---|---|
| 2.1 | Gender of the respondent/trader | 1=Male 2=Female | [__] |
| 2.1a | Gender of the owner | 1=Male 2=Female | [__] |
| 2.2 | Which is the trading activity you are involved in? | 1. Collector<br>2. Retailer<br>3. Wholesaler<br>4. Other (Specify________________________) | [__] |
| 2.3 | How long have you been trading? | 1. Less than 1 year ago<br>2. 1-3 years ago<br>3. 3-5 years<br>4. Over 5 years ago | [__] |
| 2.4 | How many days per week is your shop open? | Every day<br>Six<br>Five<br>Depends/no answer | [__] |
| 2.5 | Do you have electricity? | Yes, always<br>Yes, most of the time<br>Yes, sometimes<br>Yes, with generator<br>No | [__] |
| 2.6 | Do you have a refrigerator? | 0 if none, otherwise number of fridges | [__] |
| 2.6 | Is the shop large, medium or small (observation) | 1=large 2=medium 3=small | [__] |
| 2.6 | Do you have one or more warehouse(s)? | | [__] |
| 2.6a | **If Yes:** Estimated the area for the warehouse (s) in meter square: | | [__] $m^2$ |
| 2.7 | Please provide an estimate of the number of your customers during the past week; | Less than 10<br>More than 10, Less than 50<br>More than 50, less than 100<br>More than 100<br>No answer | [__] |

| Section 3: Seasonality, Prices and Availability | | | |
|---|---|---|---|
| 3.1 | In your opinion, would the sale price of food items in the market decrease, remain the same or in-crease in the coming six months? | No change<br>Decrease<br>Increase<br>No answer | [__] |
| 3.2 | If there will be an increase or a decrease in sales prices, what would be the main reason for this? | Lean season or bad harvest<br>(Good) harvest<br>More imports / inflows from surplus zones<br>Less imports / inflows from surplus zones<br>More exports / outflows<br>Less exports / outflows<br>More food assistance<br>Less food assistance<br>Other (specify_______________)<br>No answer | [__] |

| Section 4: Trade route and market functions: source and destination markets | | | |
|---|---|---|---|
| 4.1 | Where do the food commodities you are selling normally come from?<br>*(Choose all that apply)* | Source of Food Commodity | 1= Yes 2=No |
| | | 4.1a. Farmers within district | [__] |
| | | 4.1b. Farmers outside district | [__] |
| | | 4.1c. Traders within district | [__] |
| | | 4.1d. Traders in other districts within the country | [__] |
| | | 4.1e. Supplier in this governorate | [__] |
| | | 4.1f. Supplier in another governorate | [__] |
| | | 4.1g. Traders in other countries | [__] |
| | | 4.1h. Other (specify:_______________) | [__] |
| 4.2 | Is there an intermediate market through from which you bring in the commodities? | | [__] |
| 4.4 | Where do your goods normally get sold in the end? | 1. Within this town/city<br>2. In a nearby town/city<br>3. In another governorate<br>4. In the big city/market in another governorate<br>5. Other (Specify_______________) | [__] |
| 4.5 | Is there an intermediate market through which you sell out the commodities? | 1= Yes 2=No | [__] |
| 4.6 | How do you mainly/normally transport your goods to the market? | 1. Through sales/supply van<br>2. Public transportation<br>3. Motorcycle<br>4. Taxi<br>5. Other (specify_______________) | [__] |
| 4.7 | What is the main storage facility you are using to store your goods? | 1. My house<br>2. My shop<br>3. Warehouse at home<br>4. A warehouse belonging to other companies<br>5. In a public warehouse<br>6. Rented storage in the city | [__] |
| 4.8 | Is the situation different this year (in terms of your customer base)? | 1= Yes 2=No | [__] |

| Section 5: Stocks strategy and Response Capacity | | | |
|---|---|---|---|
| 5.2 | What are the 3 most important constraints preventing you to increase the amount you sell (of the selected commodity)? | Lack of own capital<br>Lack of credit / credit is too expensive<br>Low or varying quality of production (supply)<br>Low or irregular quantity of production (supply) incl. trade restrictions<br>Lack of means of transport<br>Poor road infrastructure / transport cost too high<br>Too much insecurity<br>Lack of storage<br>Low profit margin (low sales price, high purchase price)<br>Lack of demand<br>Competitors would not allow me to grow so much<br>Government would not allow me / taxes too high<br>Other (specify:_________)<br>No answer | 1st [__]<br>2nd [__]<br>3rd [__] |
| 5.3 | Do you have ability/capacity to increase your commodity stock if the demand increased by : | | [__] |
| | Percentage change | If yes, what is the time frame to do that | |
| | 25% | Yes, within a week<br>Yes, within two weeks<br>Yes, within a month<br>Yes, but only after more than one month<br>No | [__] |
| | 50% | Yes, within a week<br>Yes, within two weeks<br>Yes, within a month<br>Yes, but only after more than one month<br>No | [__] |
| | 100% | Yes, within a week<br>Yes, within two weeks<br>Yes, within a month<br>Yes, but only after more than one month<br>No | [__] |

| Section 6: Debt/Credit | | | |
|---|---|---|---|
| 6.1 | Generally, do you provide credit to your customers? | 1. Yes 2. No | [__] |
| 6.2 | Might you provide more credit to specific gender than...? | 1. More to males 2.More to females 3. Same | [__] |
| 6.3 | What percentage of your monthly sales (value) do you sell on credit? | | [__]% |

| Section 7: Food Desert | | | |
|---|---|---|---|
| 7.1 | Where do your costumers come from? | From surrounding area only,<br>From surrounding area and other areas in this district,<br>From this district and other districts.<br>From other regions | [__] |
| 7.2 | How is the access to the shop considered for costumers? | Very good,<br>Good, Mediocre,<br>Poor,<br>Very poor | [__] |
| 7.3 | How far do your costumers come from? | distance | [__] Km |
| | | hours | [__] hs |

| Section 8: Competition | | | |
|---|---|---|---|
| 8.1 | How many other traders (of your size) are in this market? | 1. One to three<br>2. Four to six<br>3. Six to ten<br>4. More than ten | [__] |
| 8.2 | What is the level of competition at the retail level? | 1. High (many retailers selling the same commodity)<br>2. There is one dominant trader, who is followed by all others in terms of pricing<br>3. Low (there are only a few retailers) | [__] |
| 8.3 | What is the level of competition at the wholesale level? | 1. High (many wholesalers selling the same commodity)<br>2. There is one dominant wholesaler, who is followed by others in terms of pricing<br>3. Low, there are only a few wholesalers | [__] |
| 8.4 | Who are your 2 main suppliers? | Farmers<br>Middlemen<br>Factories<br>Traders<br>Other (Specify________________________) | [__]<br>[__] |

| Section 9: Trader's constraints and risks Section | | | |
|---|---|---|---|
| 9.1 | What are the major constraints you face as a trader, which prevents you from supplying the market?<br>*(Choose all that apply)* | Major constraints | 1= Yes 2=No |
| | | 9.1a. Lack of adequate own money for trading | [__] |
| | | 9.1b. High food prices from the source | [__] |
| | | 9.1c. High transport costs | [__] |
| | | 9.1d. Poor infrastructure | [__] |
| | | 9.1e. High level of Insecurity | [__] |
| | | 9.1f. Low profit margin | [__] |
| | | 9.1g. Limited/unstable demand | [__] |
| | | 9.1h. Few people are controlling the market | [__] |
| | | 9.1i. High taxes and license fees (market tax/sales) tax) | [__] |
| | | 9.1j. Lack of credit / credit is too expensive | [__] |
| | | 9.1k. Irregular supply including trade restrictions | [__] |
| | | 9.1l. Lack of means of transport and poor road access | [__] |
| | | 9.1m. Lack of storage | [__] |
| | | 9.1n. Other (specify) | [__] |

| Section 9: Trader's constraints and risks | | | |
|---|---|---|---|
| 9.3 | How frequently you replenish your stocks? | Weekly<br>Twice a month<br>Once a month<br>Other (______________________) | [__] |
| 9.4 | Who decide on your business running decisions (buying, selling, pricing, having or giving credit)? | 1.Self<br>3. Other household member<br>5. Self and Spouse<br>2. Spouse<br>4. Self and Spouse<br>6. Self and other household/family member | [__] |

| Section 10: Prices, Availability and Sources | | | | |
|---|---|---|---|---|
| Commodity | 10.1 Availability | 10.3 Imported | 10.4 Source | 10.5 Price |
| | 1=always<br>2=seasonal<br>3=sporadic | % | 1=Farmers<br>2=Local Traders<br>3=Regional Traders<br>4=Nat. Traders<br>5=Intl. Traders | in TJ SOM |
| a. Meat -mutton | | | | |
| b. Meat-beef | | | | |
| c. Chicken | | | | |
| d. Sugar | | | | |
| e. Potatoes | | | | |
| f. Cabbage | | | | |
| g. Carrots | | | | |
| h. Salt | | | | |
| i. Rice | | | | |
| j. Wheat flour high quality | | | | |
| k. Wheat flour first grade | | | | |
| l. Wheat flour local produce | | | | |
| m. Vegetable oil | | | | |
| n. Cotton Oil | | | | |
| o. Onion | | | | |
| p. Pulses (Lobiyo - haricot bean) | | | | |
| q. Pulses (Nakhud - chick peas) | | | | |
| r. Milk | | | | |
| s. Eggs | | | | |
| t. Tomatoes | | | | |

| Section 11: Closing | | | |
|---|---|---|---|
| 11.1 | Are you willing to allow WFP staff to visit your shop for monitoring purposes? | 1= Yes<br>2= No | [__] |
| 11.2 | Would you be interested in participating to a voucher program in the future with WFP? | 1= Yes<br>2= No<br>3= I don't know | [__] |

# ANNEX D.3 Questionnaire for FGD with Farmers

**Consent**

*My name is **[Enumerator's name].** WFP is collecting information on markets and climate from farmers in **[Area/District]** in Tajikistan. We would like to ask you some questions about your trade/business. The purpose of collecting this information is to support WFP's operational planning and decisions regarding its climate and market based intervention to assist the most vulnerable population in the country. The discussion usually takes 30min-1h to complete. Any information that you provide will **only be used by WFP** and are **not subject to disclosure**. Your participation is vol-*

**INTERVIEW**

**Team/Facilitators:** ______________________

**Date:** ______________________

**District Name:** ______________________

**Closest Market:** ______________________

| Section 1: Market Structure and Conduct for Farmers | | | |
|---|---|---|---|
| 1 | How's market working for your products? | | |
| 2 | How did the agriculture production change in the recent years? | | |
| 3 | What are the 2 main challenges for farmers? | Changing Climate/New Seasons<br>Market controlled by middlemen<br>Low predictability<br>No/little storage capacity<br>High costs of agricultural inputs<br>Other (Specify_________) | 1st [__]<br>2nd [__] |
| 4 | Do you have cooperative/ farmer association? | Yes<br>No | [__] |
| 4.1 | If yes, how many members? | | [____] |
| 4.2 | Which service do they offer? | Collective storage<br>Credit<br>Info sharing (via ______)<br>Collective negotiations<br>Other (_______________) | [__]<br>[__]<br>[__]<br>[__]<br>[__] |
| 5 | Who do you sell your products to? | Market (final users)<br>Collectors<br>Traders<br>Wholesalers<br>Retailers<br>Government | [__]<br>[__] |
| 6 | Where do you sell your products? | Farm gate<br>Market in the district<br>Market in the region<br>I don't sell (consume only)<br>Other (_____________) | [__]<br>[__] |
| 7 | Who decides the price of the commodities you sell? | Myself<br>Spouse<br>Other HH member<br>Collective HH decision<br>Farmers Association<br>Traders<br>Government<br>Other (_______________) | [__] |
| 8 | How do you have the access to the price data? | Going to Market<br>Traders<br>Other Farmers (Word of Mouth)<br>Radio<br>SMS/mobile phone<br>Info point<br>Newspaper<br>Other (_______________) | [__] |

| Section 1: Market Structure and Conduct for Farmers | | | |
|---|---|---|---|
| 9 | Which are the main products your district produce? | 1.____________<br>2.____________<br>3.____________ | 1.____________<br>2.____________<br>3.____________ |
| 9-1 | What are the main challenges related to them? | 1.____________<br>2.____________<br>3.____________ | 1.____________<br>2.____________<br>3.____________ |
| 9-2 | What could be a viable solution? | 1.____________<br>2.____________<br>3.____________ | 1.____________<br>2.____________<br>3.____________ |
| 10 | What other products you could cultivate if there is demand? | 1.____________<br>2.____________<br>3.____________ | 1.____________<br>2.____________<br>3.____________ |
| 11 | Can you provide the names, address, and telephone of few big suppliers of food commodities you are in contact? | 1.____________<br>2.____________<br>3.____________ | 1.____________<br>2.____________<br>3.____________ |
| 12 | Who decides when and what to plant? | Myself<br>Spouse<br>Other HH member<br>Farmers Association<br>Traders<br>Government<br>Other (____________) | [__] |
| 13 | Do you have access to the credit and from whom? | Yes, formal (bank)<br>Yes, from farmer association<br>Yes, from HH members/friends<br>Yes, from traders<br>No | [__] |
| 14 | What is your selling strategy? | Sell right after harvest<br>Store until price is more convenient<br>Sell land produce at fix price regardless harvest | [__] |
| 15 | Do women participate in the farming decision-making process? | Yes, at any step<br>Yes, only some decisions (__________)<br>No | [__] |
| 16 | What is the percentage of women farmers in your district? | What is the percentage of women farmers in your district? | [___]% |
| 17 | Are there any specific challenges for women farmers? | | |

| Section 2. Climate and related Services | | | |
|---|---|---|---|
| 1 | How do weather/climate hazards affect livelihoods of your community? | | |
| 2 | Depending on the activities, who is most affected? And how? | | |
| 3 | What are the main coping strategies in response to these challenges? | ________________<br>________________<br>________________ | |
| 4 | Has there been changes in the number/type/seasonality of hazards or changes in rainfall patterns in the recent years? | Yes (________________<br>________________<br>________)<br>No | [__] |
| 5 | What type of information do you receive/are you able to access and through which means? | Market prices<br>Rainfall<br>Hazards<br>Other climate information (__________) | [__] ________<br>[__] ________<br>[__] ________<br>*(source)* |
| 5-1 | What kind of information you would like to receive in addition? | ________________<br>________________<br>________________ | |
| 6 | In your experience, how valuable is this information in helping people take decisions for their livelihoods activities? | Very valuable<br>Valuable<br>Sometimes valuable<br>Rarely valuable<br>Not valuable | [__] |
| 7 | How would you prefer to be informed about climate services, information and market prices? | SMS<br>Mobile app<br>Radio<br>TV<br>Newspaper<br>Wall in closest settlement<br>Other (__________) | [__] |
| 8 | Do you have access to insurance on your produce if any disaster (flood, drought, bad harvest, pest, etc.)? | Yes<br>No | [__] |
| 8.1 | If no, why? | | |

**For a soft copy of the report and additional information including the household questionnaire, market questionnaire and indicators by counties visit www.wfp.org/countries/tajikistan/publications**

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