REGIONAL WHEAT MARKET FUNDAMENTALS

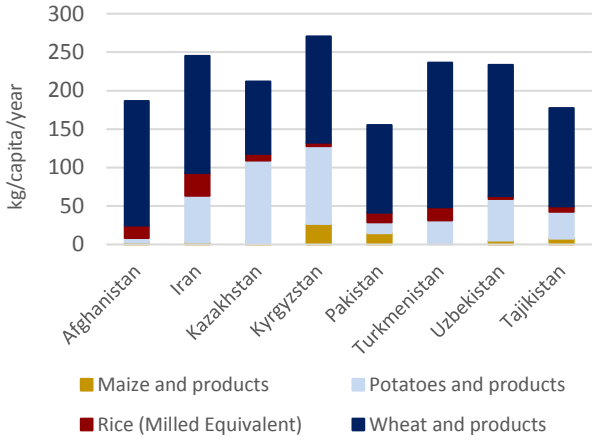
November 2016

Central Asia Summary

WHEAT CONSUMPTION AND PRODUCTION IN CENTRAL ASIA

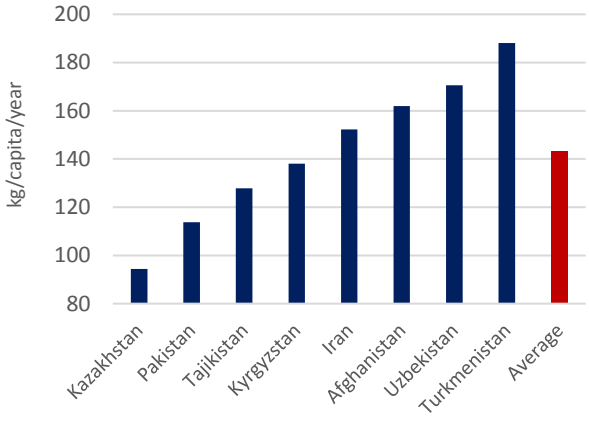
- Wheat is by far the dominant staple in the Central Asia region **(Figure 1)**. On average, per capita wheat consumption is 143 kg/year, with consumption in Afghanistan slightly above the regional average **(Figure 2)**.
- In the lower income countries of Afghanistan and Tajikistan, wheat consumption constitutes 66 percent and 49 percent of calories of the local diets, respectively (FAO 2016a). Given this dependence on wheat in the region, monitoring production and intra-regional trade of wheat is important for understanding regional food availability and access. Other important staple crops include potatoes, rice, and maize.
- The largest wheat producers in the region are Pakistan, Kazakhstan, and Iran. Together they comprise nearly 80 percent of the total regional production **(Figure 3)**. The smallest producers are Tajikistan, Kyrgyzstan, and Afghanistan. Only Kazakhstan and Pakistan are net wheat exporters. Iran imports both wheat grain and flour and exports small amounts of wheat flour (**Figure 1**).
- Wheat is grown intensively in a few areas in the region. More than 80 percent of total wheat production in Kazakhstan is grown in the northern regions of Kostanay, Akmola, and North Kazakhstan in (Chabot and Tondel 2011). The major production area in Pakistan is the Punjab province where more than three-fourths of Pakistani wheat is produced (Chabot and Tondel 2011). In Iran, the major wheat producing areas are the northeastern provinces of North Khorasan, Razavi Khorasan, and South, and the south central province of Fars (USDA FAS 2008).

Figure 1. Staple food consumption, Central Asia, 2011



Source: FEWS NET calculations based on data from FAOSTAT.

Figure 2. Wheat consumption in kg per capita in Central Asia, 2011



Source: FEWS NET calculations based on data from FAOSTAT.

ABOUT THIS REPORT

This regional summary report provides an overview of typical production and market behavior in the Central Asian wheat market. Particular focus is given to the countries in which FEWS NET monitors food security, **Afghanistan** and **Tajikistan**, as well as the regional producers that have the greatest impact on wheat markets in these countries, **Pakistan**, and **Kazakhstan**. In addition, other Central Asian countries were also included to present a more complete picture of wheat market dynamics in Central Asia. These include Iran, Uzbekistan, Turkmenistan, and Kyrgyzstan.

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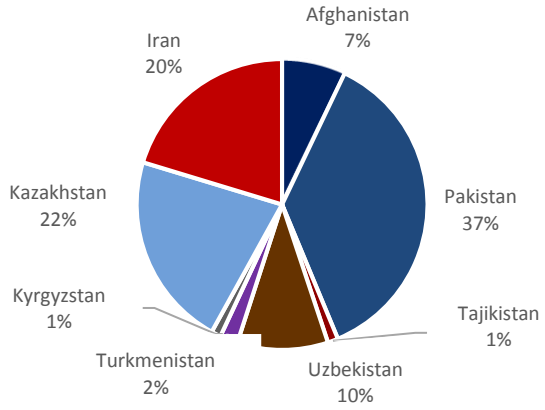
- Inter-annual production can be highly variable due to the reliance on rain-fed crops for the majority of wheat production in the region (**Figure 4**). Pakistan is the exception where the majority of wheat production is on irrigated land.

OVERVIEW OF CENTRAL ASIA WHEAT MARKET

- Intra-regional trade is critical as production is not balanced in the region. Kazakhstan and Pakistan are structurally surplus-producing countries, while Afghanistan, Uzbekistan, and Tajikistan have a structural deficit **(Figure 5)**. Typically, all of Afghanistan's wheat imports come from Pakistan and Kazakhstan, while all of Tajikistan's wheat imports come from Kazakhstan.
- Kazakhstan is the major wheat exporting country in the region, supplying more than 80 percent of the exported wheat in Central Asia during the last five years. Kazakhstan is well integrated with global markets.
- The most import-dependent country is Tajikistan, where its self-sufficiency ratio has not surpassed 0.6 in the last five years, followed by Uzbekistan, Kyrgyzstan and Afghanistan **(Figure 6)**.
- Pakistan produces the most wheat in the region, but with a population of 190 million, also has the highest domestic requirements. Nevertheless, Pakistan typically produces a surplus of wheat that is exported in the form of wheat flour to Afghanistan. Pakistan is not well integrated in international wheat markets due to significantly higher domestic prices.

Figure 3. Share of wheat production among countries in Central Asia, average of 20011/12-2015/16



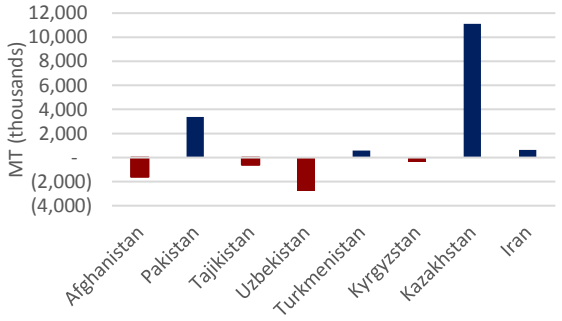
Source: FEWS NET estimates based on data from USDA PSD, FAOSTAT, Afghanistan Ministry of Agriculture, Irrigation and Livestock, Pakistan Ministry of Finance, and Ministry of National Economy of the Republic of Kazakhstan.

Figure 4. Inter annual variation in wheat production, Central Asia, 2000-2016

	Coefficient of variation
Afghanistan	0.31
Kazakhstan	0.24
Tajikistan	0.24
Kyrgyzstan	0.23
Iran	0.16
Turkmenistan	0.16
Uzbekistan	0.12
Pakistan	0.11

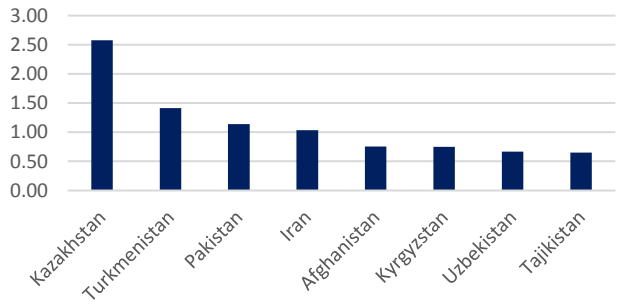
Source: FEWS NET estimates based on data from USDA PSD, FAOSTAT, Afghanistan Ministry of Agriculture, Irrigation and Livestock, Pakistan Ministry of Finance, and Ministry of National Economy of the Republic of Kazakhstan.

Figure 5. Wheat supply surplus/deficits by country in thousands of MT, average of 2011/12-2015/16



Source: FEWS NET estimates based on data from USDA PSD, FAOSTAT, FAO GIEWS, UN COMTRADE, Afghanistan Ministry of Agriculture, Irrigation and Livestock, Pakistan Ministry of Finance, and Ministry of National Economy of the Republic of Kazakhstan.

Figure 6. Wheat self-sufficiency ratio by country (net supply with respect to demand), average of 2011/12-2015/16



Source: FEWS NET estimates based on data from USDA PSD, FAOSTAT, FAO GIEWS, UN COMTRADE, Afghanistan Ministry of Agriculture, Irrigation and Livestock, Pakistan Ministry of Finance, and Ministry of National Economy of the Republic of Kazakhstan.

- The timing of Central Asian wheat harvests vary depending on the country. In northern Central Asia, both spring and winter wheat are cultivated in rain-fed areas. Winter wheat planting starts in October, while spring wheat planting takes place in March. Harvesting starts as early as June and continues until late September. In Pakistan, winter wheat is cultivated mostly on irrigated areas and due to warm temperatures the harvest starts earlier than in other areas of the region **(Figure 7)**.

Figure 7. Regional seasonal calendar for wheat

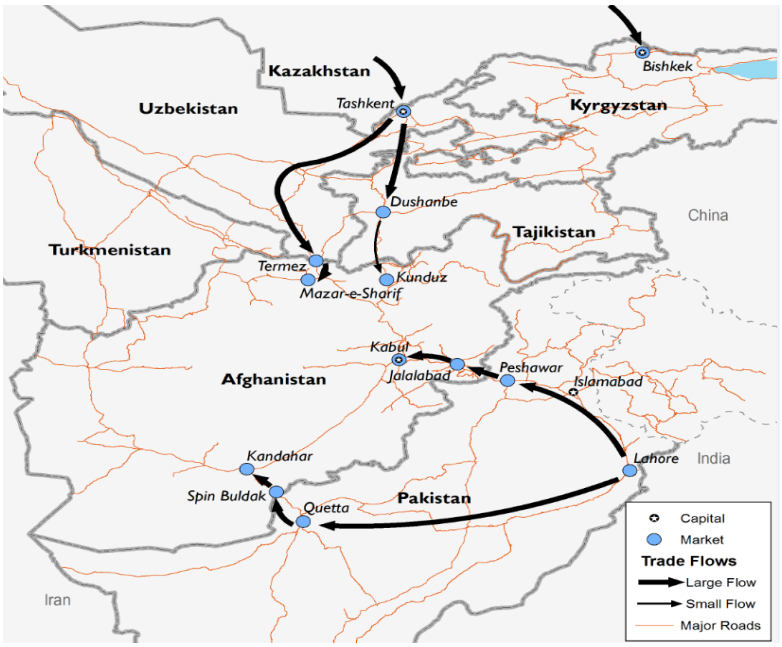
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
Pakistan				Harvest						Planting		
Afghanistan			S. Planting			Harvest				W. Planting		
Tajikistan			S. Planting			Harvest				W. Planting		
Kazakhstan					Planting				Harvest			

Source: FEWS NET calculations based on data from FAO GIEWS.
Note: S. planting refers to spring planting and w. planting refers to winter planting.

TRADE DYNAMICS AND DRIVING FORCES

- Wheat flows north from Kazakhstan through Uzbekistan on its way to both Tajikistan and Afghanistan. From Pakistan, there are two major entry ways into Afghanistan (**Figure 8**). Rail is the main method of transporting wheat in the region (Chabot and Tondel, 2011). However, in Afghanistan, once wheat reaches the borders it is transported via trucks due to the country's undeveloped rail system and mountainous terrain.

Figure 8. Wheat trade flows in Central Asia



Source: FEWS NET

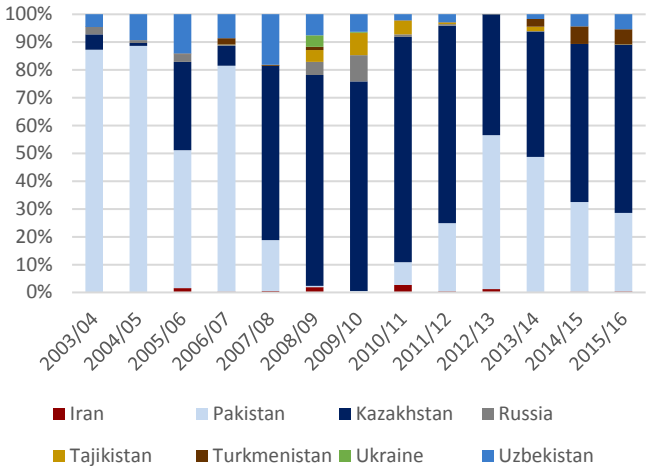
- Pakistan's government is extensively engaged in regulating its wheat market. The government sets a minimum guaranteed procurement price, purchases wheat directly from farmers, and then releases wheat to mills at fixed prices. The government has also introduced wheat export subsidies to incentivize exports. The domestic wheat market is protected from cheaper international prices through a 40 percent duty on wheat imports (Asmat 2016). Pakistani domestic prices are significantly higher than international reference prices.

- The Government of Kazakhstan (GOK) has actively encouraged crop diversification by providing higher subsidies to crops other than wheat. This resulted in a decrease of wheat area planted of wheat from 14.7 million ha to 11.7 million ha from 2009 to 2015. The GOK has indicated that it plans to continue a crop diversification strategy (USDA FAS 2016a).

- Nearly one-third of Afghanistan's domestic requirements for wheat are met through imports. On average, over the past five years, Afghanistan produced 4.7 million MT and imported about 2.1 million MT annually. Over this period, Afghanistan's wheat imports have been split mostly between Kazakhstan and Pakistan, though annually the proportion of imports vary. For example, from 2008 to 2010, Pakistan banned wheat exports. **(Figure 9).**

- All imports of wheat into Tajikistan are sourced from Kazakhstan. Tajikistan relies on Kazakhstan to meet nearly half of its domestic wheat requirements. On average, over the past five years, Tajikistan has produced 784,000 MT and imported over one million MT annually from Kazakhstan.
- The wheat milling industry is underdeveloped in the net importing countries of Afghanistan and Tajikistan, but well developed in the exporting countries of Kazakhstan and Pakistan (FAO 2016b). Thus, the majority of wheat imported by Afghanistan and Tajikistan is in the form of flour instead of grain. Other import dependent countries, namely Uzbekistan and Kyrgyzstan, generally import more grain than wheat since their milling sectors are more developed (USDA FAS 2016a).

Figure 9. Proportion of Afghan wheat grain and flour import sources between 2003/04 and 2015/16



Source: Central Statistics Organization of Afghanistan (2016).

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ANNEX 1 Wheat balance table, Central Asia, 2015-2016

Country	Attribute	2015/16	2016/17	5yr Average 2011/12 - 2015/16	Change over one year	Change over 5yr average
Afghanistan	Production	5,000	5,100	4,795	2%	6%
	Opening Stocks	310	410	163	32%	152%
	Supply	5,310	5,510	4,958	4%	11%
	Requirements	7,600	7,900	6,557	4%	20%
	Net Supply	(2,290)	(2,390)	(1,599)	4%	50%
	Self-sufficiency ratio	0.70	0.70	0.76	0%	-8%
Pakistan	Production	25,086	25,482	24,793	2%	3%
	Opening Stocks	3,351	5,016	2,580	50%	94%
	Supply	28,437	30,498	27,373	7%	11%
	Requirements	24,400	24,500	24,000	0%	2%
	Net Supply	4,037	5,998	3,373	49%	78%
	Self-sufficiency ratio	1.17	1.24	1.14	7%	9%
Tajikistan	Production	770	770	784	0%	-2%
	Opening Stocks	548	568	351	4%	62%
	Supply	1,318	1,338	1,135	2%	18%
	Requirements	1,875	1,925	1,737	3%	11%
	Net Supply	(557)	(587)	(602)	5%	-3%
	Self-sufficiency ratio	0.70	0.70	0.65	-1%	7%
Uzbekistan	Production	4,320	4,320	4,098	0%	5%
	Opening Stocks	2,200	2,513	1,587	14%	58%
	Supply	6,520	6,833	5,685	5%	20%
	Requirements	9,350	9,500	8,490	2%	12%
	Net Supply	(2,830)	(2,667)	(2,805)	-6%	-5%
	Self-sufficiency ratio	0.70	0.72	0.67	3%	7%
Turkmenistan	Production	1,406	1,600	1,341	14%	19%
	Opening Stocks	564	374	660	-34%	-43%
	Supply	1,970	1,974	2,001	0%	-1%
	Requirements	1,280	1,300	1,420	2%	-8%
	Net Supply	690	674	581	-2%	16%
	Self-sufficiency ratio	1.54	1.52	1.41	-1%	7%
Kyrgyzstan	Production	700	700	722	0%	-3%
	Opening Stocks	183	158	261	-14%	-39%
	Supply	883	858	983	-3%	-13%
	Requirements	1,300	1,310	1,315	1%	0%
	Net Supply	(417)	(452)	(332)	8%	36%
	Self-sufficiency ratio	0.68	0.65	0.75	-4%	-12%
Kazakhstan	Production	13,748	14,500	14,652	5%	-1%
	Opening Stocks	3,245	2,568	3,445	-21%	-25%
	Supply	16,993	17,068	18,097	0%	-6%
	Requirements	6,900	6,900	6,980	0%	-1%
	Net Supply	10,093	10,168	11,117	1%	-9%
	Self-sufficiency ratio	2.46	2.47	2.57	0%	-4%
Iran	Production	11,500	12,500	9,908	3%	13%
	Opening Stocks	7,916	8,176	5,375	3%	70%
	Supply	19,416	20,676	15,283	3%	28%
	Requirements	18,000	18,500	16,740	3%	11%
	Net Supply	1,416	2,176	(1,457)	5%	185%
	Self-sufficiency ratio	1.08	1.12	0.91	1%	16%
Total	Production	61,760	64,202	60,309	4%	6%
	Opening Stocks	17,769	19,215	14,071	8%	37%
	Supply	79,529	83,417	74,380	5%	12%
	Requirements	68,830	69,910	65,502	2%	7%
	Net Supply	10,699	13,507	8,878	26%	52%
	Self-sufficiency ratio	1.16	1.19	1.14	3%	5%

Source: FEWS NET estimates based on data from USDA PSD, FAOSTAT, FAO GIEWS, UN COMTRADE, Afghanistan Ministry of Agriculture, Irrigation and Livestock, Pakistan Bureau of Statistics, and Ministry of National Economy of the Republic of Kazakhstan