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1. Introduction

The Kyrgyz Republic is a small landlocked mountainous country in Central Asia. The population is multi-ethnic composition society of 6.2 million people (70% Kyrgyz, 15% Uzbek and 7% Russian). It is one of the poorest countries in the Europe and Central Asia region, with GNI per capita of $1,100 in 2016 (Atlas method). Located within reach of the large Chinese, Russian and South Asian markets, it borders rapidly-growing middle-income Kazakhstan, Tajikistan, Uzbekistan and mountainous Xinjiang part of China. Kyrgyzstan demonstrates a trend to build more open institutions but has controversially environment in developing democracy and civic freedom.

Kyrgyz Republic’s economy demonstrates recovering the economic situation, experiencing economic growth of 4.5% in 2017. Entering Kyrgyzstan to Eurasian Economic Union did not bring an expected growth of export to Russia and Kazakhstan, but led to keeping labor migration on the high turns. Remittances growth and reach one-third of GDP. Kyrgyzstan has declining share of agriculture in GDP with 34% in 2000 and 14% in 2015. At the same time importance of agriculture simultaneously fell employment in the sector from 53% to 29% for the same period of time. While long-term economic growth in the country varies from 4 to 4.5%, agriculture grew on the 2% on average for the last fifteen years. The share of crop production slowly decreasing, with the replacing importance of livestock sector.

Food security and nutrition agenda rise during Food Crisis in 2008-2010. The rapid growth of the consumer prices led to decrease in the purchasing power of the population. Poverty rate increases from 31.7% in 2008 to 38% in 2012. Most of ‘new’ poor residents located in urban areas, an increase of the rural poverty was less obvious. Kyrgyz Government with the development organizations support increased attention to food security and nutrition issues. Food Security Law was adopted in 2008. Government arrange series of direct market interventions in 2009-2010 - an increase of the food reserves, create state enterprise ‘Kyrgyz Agro-Industrial Company’, improves information on main food item prices, introduce bans on the export of some food items and agricultural inputs.
After stabilization and improvement the economic situation, the country has experienced a significant decline in poverty during last five years, despite some decline of economic growth in previous years (3.5% in 2015 and 3.8% in 2016). An aggregate poverty fell from 38 % in 2012 to 25 % in 2016, while extreme poverty declined from 4.4 % to 0.8 % over the same period. Prevalence of undernourishment declines from 10% in 2005-2007 to 6.4% in 2014-2016. Stunting among children up to 5 years also demonstrate progress - decrease from 18% in 2005 to 13% in 2016.

At the same time Kyrgyz Government adopt in 2015 Food Security and Nutrition Program (FSNP) on 2015-2017, proclaiming a comprehensive set of the measures to strengthen the resistance of the country population on food security and nutrition problems as well as measures of state bodies to monitoring the situation, increase capacity in FSN issues, improve infrastructure and expertise of state bodies responsible for food safety system. The program has no budget support from Kyrgyz Government and the majority of planned actions wasn’t implemented.

The resuming country situation it might be concluded that Kyrgyzstan shows improvement similar to the progress in many neighbor countries. However public policy certainly needs an improvement in FSN area. Efforts of the population to improve their livelihoods need to be supported by the means of political actions, and investment creation better food safety infrastructure, support through information support of population to the issues of the rational food, medical consequence of improper food habit. The study will bring more insights into the current situation, gaps and challenges and prospective solutions to the problems of food security, nutrition, and safety of food.

2. **Value Chains and the Double Transformation of the Agri-Food System in Kyrgyzstan**

2.1. **Agricultural Transformation Overview**

The agricultural sector is important for Kyrgyzstan from the supply side of food to the people, but it also provides the biggest employment (self-employment) opportunity for the population. Importance of the sector in the economy changes over time due to several historically determined process during last 25 years.
Destruction of the Soviet Union in 1991 brings the country to the track of dramatic changes in all spheres, including the transformation of agricultural production systems.

Agricultural reforms on the first stage (1991-1994) wasn't successful, because it brings to quasi-transformation of the system of state collective farms. Some proportion of land was distributed to smallholders, but the legal status of land ownership was unclear at that stage. The economy decline was dramatic - country GDP between 1991 and 1995 fell by half. Agricultural output decline too, but overall economic shrinking was stronger. It brings to increase of the agriculture share in the national economy from 37% to 50%, while employment in the sector simultaneously boosted from 40% to 54% (See Figure 1).

**Figure 1. Agriculture: GDP share and employment share in Kyrgyzstan in 1991-2016, %**

![Graph showing GDP share and employment share in Kyrgyzstan from 1991 to 2016.](image)

**Source:** World Development Indicators

**Table 1. Change in the structure of agricultural production by ownership form in Kyrgyzstan in 1996-2016, % of gross agricultural output in current prices**

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>State farms</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
<td>1%</td>
<td>0.4%</td>
<td>0.3%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Collective farms</td>
<td>17%</td>
<td>11%</td>
<td>8%</td>
<td>3%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Peasant (farmer) farms</td>
<td>26%</td>
<td>32%</td>
<td>43%</td>
<td>59%</td>
<td>62%</td>
<td>62%</td>
<td>61%</td>
</tr>
<tr>
<td>Rural households production</td>
<td>54%</td>
<td>55%</td>
<td>48%</td>
<td>37%</td>
<td>36%</td>
<td>36%</td>
<td>37%</td>
</tr>
</tbody>
</table>

**Source:** National Statistical Committee, own calculations
At the second stage of reform (1994-2004) production system was reorganized from collective to individual family-based smallholder farm. 75% of the arable land and 68% of livestock were distributed among the rural population. 452 state-owned collective farms were destroyed through the distribution of land and livestock and some machinery services. Most of that state farms became later bankrupt and closed. Since that period smallholder producer increase presence in agri-food systems of the country. The farm size declined from 15 hectares in 1994-1996 to 3 hectares in 2002. It led to an immediate change in the structure of agricultural production - share of peasant farms was 26% in 1996 and reach 62% in 2010. The share of all other producers declining over time. Need to notice that it stabilize and demonstrate evident stability since 2010 (See Table 1).

The third phase of agricultural reform proclaims that policy focus will concentrate on enhancing the agricultural extension services and investment in infrastructures. The policy of the state was defined as the development of cooperatives, peasant farms and agribusinesses, water and pasture management. However, public policy in agriculture practically realized as cost-minimizing strategy and strongly oriented on substantial donor support. One of the examples of such experience might be the development of the Rural Advisory Service (RAS) in Kyrgyzstan. RAS was established in 1998 as the main extension service provider, receiving substantial support from the donor agencies. The high proportion of finance by donors led to the weak sustainability of the service after the gradual disclosure of the program. The absence of financing from the state in 2010 led to the decline of operations. Such systematic underfinance led to the unavailability of the access of farmers to advisory services on the national level. Currently, RAS operates basically due to support of some regional donor projects on a limited number of sites.

During Soviet period agriculture was oriented primarily on the production of

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livestock products, crop production primarily the feed base for agricultural animals. After 1991 share of crop production start to increase and reach a maximum of 55% of total agricultural product in 2000. Later it declines to the level of 50%. Livestock production share moves in opposite direction and declines until 2000 (43%) and then start to restored and reach 48% in the recent years (Table 2). Other smaller subsectors – forestry, hunting, and fisheries- important on the certain regional clustered areas only. The stability of production structure of agricultural product coincides with the similar trends in the analysis of the structure of agricultural production by type of producers after 2010 (See Table 1) and stabilization of the demand on the labor in the sector (See Figure 1). It can be stated that current small-scale agricultural producer based on the family farm is sustainable until natural resource depletion (pastures) occurs. Long-term stability of the sector looks non-viable.

Table 2. Structure of agricultural production by sub-sectors in Kyrgyzstan, % of gross agricultural output in current prices

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Crop</td>
<td>38%</td>
<td>49%</td>
<td>55%</td>
<td>54%</td>
<td>52%</td>
<td>48%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Livestock</td>
<td>59%</td>
<td>49%</td>
<td>43%</td>
<td>44%</td>
<td>46%</td>
<td>50%</td>
<td>48%</td>
<td>48%</td>
</tr>
<tr>
<td>Services</td>
<td>1.8%</td>
<td>1.4%</td>
<td>1.4%</td>
<td>1.5%</td>
<td>2.2%</td>
<td>2.1%</td>
<td>2.2%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Hunting and forestry</td>
<td>1.1%</td>
<td>0.3%</td>
<td>0.1%</td>
<td>0.2%</td>
<td>0.0%</td>
<td>0.1%</td>
<td>0.2%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Fishery</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0.04%</td>
<td>0.04%</td>
<td>0.02%</td>
<td>0.05%</td>
</tr>
</tbody>
</table>

Source: National Statistical Committee, own calculations

Overall support of the agricultural sector is not very high. At the same time, there is no much information on the budget support to the agricultural sector. Open sources information provides provide unclear data on all aspects of support to the agriculture. However, in 2017, Kyrgyzstan reports to WTO for the 2012 year on such support according to accepted commitment⁵. Overall support to the sector includes different aspects of activities, which manages by different state agencies. For example, public stockholding for food security purposes managed by State Fund of

⁵ WTO (2017) Notification of Kyrgyz Republic on domestic support commitment for 2012
Reserves under the Government of Kyrgyz Republic, and agricultural production subsidy (subsidized credits for farmers) through Ministry of Finance in alliance with the selected commercial banks. Ministry of Agriculture, Food Industry, and Melioration (MAFIM) manage around one-third of the resources provided by the state.

Table 3. Structure of the budget support to agriculture in 2012, million US dollars

<table>
<thead>
<tr>
<th>Year</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Green Box Commitment Support</td>
<td>33.46</td>
</tr>
<tr>
<td>1 General Services</td>
<td>15.61</td>
</tr>
<tr>
<td>A Research Services</td>
<td>0.19</td>
</tr>
<tr>
<td>B Inspection Services, including epizootic and pest controls</td>
<td>1.4</td>
</tr>
<tr>
<td>C Infrastructure Services</td>
<td>14.02</td>
</tr>
<tr>
<td>2 Public stockholding for food security purposes (stock of grain for food security purposes)</td>
<td>17.85</td>
</tr>
<tr>
<td>II Non-product Specific Support</td>
<td>14.9</td>
</tr>
<tr>
<td>1 Agricultural production subsidy (Subsidized credits for farmers)</td>
<td>14.83</td>
</tr>
<tr>
<td>2 Fertilizers</td>
<td>0.07</td>
</tr>
<tr>
<td>III Total domestic support to agriculture</td>
<td>48.36</td>
</tr>
<tr>
<td>IV Consolidated budget of Kyrgyz Republic in 2012, million US dollars</td>
<td>2281.76</td>
</tr>
<tr>
<td>V The share of domestic support to agriculture to the total budget spending, %</td>
<td>2.12</td>
</tr>
</tbody>
</table>

Source: WTO, NSC

Investment in fixed assets is one of the main types of investment - during 2005-2016 overall share of investment in fixed assets in total investment reach 92%\(^7\). Official statistics show that investment in the sector below 1% of the gross agricultural output.\(^8\) Domestic investment in the main source of investment – foreign investment share for the same period was equal 36%. Unfortunately, agriculture is not the main area of investment attractive sectors - on an average investment in agriculture varies located around 20 million USD. The share of agriculture in total investment flows were 1.3% with the trend of declining in the recent five years (See

\(^6\) Total budget of the Kyrgyz Republic in 2012 was equal 107.2 billion som or 2281.7 million US dollars (Exchange rate of 1 US dollar to Kyrgyz som was equal to 47) – NSC (2018)


Foreign investment inflow in agriculture demonstrate even lower rates of participation in the sector – on an average investment of foreign origin capital was around 1 million USD or 0.1% of the total foreign investments in the country in 2005-2016. An alternative study of foreign investment activity by sectors demonstrate higher share of agriculture – around 5%. However, even that rate shows that agriculture is not the focus of investment attraction from the foreign capital perspective. Disinvestment in the sector continues for the last 20-25 years and led to a predetermination of the declining productivity in the sector.

2.2. Food Security and Nutrition (FSN) State in Kyrgyzstan

Traditional Food Security and Nutrition concept analyses the situation from the different basic dimensions of food needs for a society - food availability, access to food, balanced nutrition, utilization, and stability. Such a framework creates a better vision of the interlinked causalities and limitations of the current condition of a Kyrgyz Republic. Food Availability in Kyrgyzstan during last two decades might be characterized by the energy supply adequacy (Figure 3). Need to notice that FAO estimates for Kyrgyzstan for a...
minimum dietary energy intake vary from 1818 to 1865 during 2000-2016. That estimated level of the indicator is different than the previous overall FAO estimate equal to 1800 kilo/calories per person per day defined in 1996 and 2100 kilo/calories used by U.S. Department of Agriculture. However, it is in the similar range with the neighboring Central Asian countries. Indicator for Kyrgyzstan was above the required level of dietary energy supply in the observed period and demonstrates the stagnating values in 1999-2001. Further, it shows growth between 2002 and 2004 and again stagnating and decline until 2010 with the very slow tendency to growth. For the last 17 years indicator show growth on 12% - from 107% to 120%.

In Central Asia, the country could be compared with the two neighbor countries shows us a similar trend to improve food supply in energy terms in the country with higher economic performance (Kazakhstan) and lower economic performance (Tajikistan). Kyrgyzstan demonstrates a better state of energy supply than Tajikistan and lower values than Kazakhstan. However, that indicator did not show us the actual consumption in the Kyrgyz society and also did not reflect the equal distribution between the poorer and richer strata of the society.

Figure 3. Dynamics of average dietary energy supply adequacy in Kyrgyzstan and neighbor countries in 1999-2016, %

Another dimension of food availability is a share of energy obtained from cereals, roots, and tubers. The indicator supposed that the share demonstrates the diversity of the sources of food. The lower share means that the share of alternative sources of food available for the consumers, e.g. products of animal origin, fruits, beans etc. In Kyrgyzstan indicator demonstrate quite a slow improvement over time. During 1999-2013 it declines from 58% to 53% only. At the same time in Tajikistan, the same indicator...
declines on 13% - from 71 to 58%. In Kazakhstan it down in almost two times – from 56 to 33%.

Kyrgyz Republic's trade policy was oriented on the establishment of bilateral or regional free-trade agreements from the early stage of the country creation. A free trade agreement with Russia was established in 1992, and with Armenia since 1994. Since 1995 such agreements were concluded with Kazakhstan, Ukraine, and Moldova. Other CIS countries signed such agreements between 1996 and 2006. The Kyrgyz Republic is the member of WTO since 1998. Kyrgyzstan applies a highly liberalized trade regime among Central Asian countries. The average import tariff rate during period 2006-2012 was about 5%, and the maximum customs duty rate was 20%.

Except for dairy products, vegetables, and most of the fruits, the Kyrgyz Republic is strongly dependent on imports of food, specifically in terms of wheat (flour), meat, oil, and sugar. Kyrgyzstan’s trade balance is negative for the most of processed food except for dairy products and vegetables (See Table 4). The negative trade balance for wheat/meslin flour was USD 31.6 million in 2016. However, peak negative balance reaches 67 million USD in 2011. Most important food and agri-products composed the biggest negative trade balance: Meat and edible meat offal (USD 17.7 million), animal/vegetable fats and oils (USD 51.5 million), cocoa and cocoa products (USD 41.4 million), and sugar and sugar confectionery (USD 54.65 million). Food imports are thus widely diversified providing the diversified diet for the national food consumption. The main exported products are fruits, vegetables, and dairy products.

Kazakhstan is the largest suppliers of imports of wheat flour and wheat to the country. In 2016, nearly all imports of wheat flour (99.6%) originated in Kazakhstan (USD 38.5 million and 16.7 thousand tons). In the previous years, Russia also supplied wheat flour to Kyrgyzstan. Similarly to flour 99.9% of all imports of wheat came from Kazakhstan (USD 39.5 million and 185 thousand tons). In the same year, imports of meat and edible meat offal (USD 18.2 million) mainly originated from China (48%) and Russian Federation (38%). Most of the imported meat was poultry (90%). The main items of the export of food are the vegetables (primarily kidney beans, fruits and dairy products. The main

destination for fruits and dairy products are Russia and Kazakhstan and for the kidney beans is Turkey\textsuperscript{15}.

Table 4. Trade balance of food, beverage and agricultural items of Kyrgyz Republic, million US dollars, 2000–2016

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Meat and edible meat offal</td>
<td>02</td>
<td>-1.0</td>
<td>-12.5</td>
<td>-69.3</td>
</tr>
<tr>
<td>Fish, crustaceans, etc.</td>
<td>03</td>
<td>-1.5</td>
<td>-2.1</td>
<td>-7.6</td>
</tr>
<tr>
<td>Dairy products, eggs, honey, etc.</td>
<td>04</td>
<td>-0.1</td>
<td>12.2</td>
<td>11.2</td>
</tr>
<tr>
<td>Edible vegetables and certain roots and tubers</td>
<td>07</td>
<td>4.2</td>
<td>22.9</td>
<td>91.9</td>
</tr>
<tr>
<td>Potatoes</td>
<td>0701</td>
<td>0.3</td>
<td>-0.2</td>
<td>18.3</td>
</tr>
<tr>
<td>Including dried vegetables, shelled</td>
<td>0713</td>
<td>1.5</td>
<td>16.8</td>
<td>51.2</td>
</tr>
<tr>
<td>Edible fruit, nuts, peel of citrus fruit, melons</td>
<td>08</td>
<td>2.9</td>
<td>-1.8</td>
<td>17.9</td>
</tr>
<tr>
<td>Cereals</td>
<td>10</td>
<td>-34.2</td>
<td>-34.5</td>
<td>-78.6</td>
</tr>
<tr>
<td>Including wheat and meslin</td>
<td>1001</td>
<td>-33.1</td>
<td>-25.3</td>
<td>-67.0</td>
</tr>
<tr>
<td>Including rice</td>
<td>1006</td>
<td>-0.5</td>
<td>-8.9</td>
<td>-8.0</td>
</tr>
<tr>
<td>Milling products, malt, starches, inulin, wheat gluten</td>
<td>11</td>
<td>1.7</td>
<td>-9.6</td>
<td>-50.6</td>
</tr>
<tr>
<td>Including wheat or meslin flour</td>
<td>1101</td>
<td>2.8</td>
<td>-7.4</td>
<td>-45.3</td>
</tr>
<tr>
<td>Animal, vegetable fats and oils, etc.</td>
<td>15</td>
<td>-3.1</td>
<td>-13.1</td>
<td>-72.6</td>
</tr>
<tr>
<td>Meat, fish and seafood food preparations</td>
<td>16</td>
<td>-1.0</td>
<td>-1.4</td>
<td>-5.0</td>
</tr>
<tr>
<td>Sugars and sugar confectionery</td>
<td>17</td>
<td>-2.5</td>
<td>-44.6</td>
<td>-95.3</td>
</tr>
<tr>
<td>Cocoa and cocoa preparations</td>
<td>18</td>
<td>-2.7</td>
<td>-15.9</td>
<td>-65.3</td>
</tr>
<tr>
<td>Cereal, flour, starch, milk preparations and products</td>
<td>19</td>
<td>-2.6</td>
<td>-10.0</td>
<td>-39.5</td>
</tr>
<tr>
<td>Vegetable, fruit, nut, etc. food preparations</td>
<td>20</td>
<td>-0.1</td>
<td>-3.7</td>
<td>-12.5</td>
</tr>
</tbody>
</table>

Source: UN Comtrade

\textsuperscript{15} UN Comtrade data
The Kyrgyz Republic joined the Eurasian Economic Union (Russia, Kazakhstan, Belarus, and Armenia) from the August 2015. It creates a certain contradiction with the WTO rules, because of the higher tariffs of EEU. The Kyrgyz Republic notified the WTO member countries about the necessity of the negotiations on the revision of tariff obligations to the WTO in connection with the accession to the Treaty on the Eurasian Economic Union16.

**Figure 5. Dynamics of GDP per capita in Kyrgyzstan in 1990-2016, PPP (constant 2011 international $)**

Access to Food demonstrated by the different dimensions of economic ability of the population to cover the set of basic needs. From the early beginning of independence, the ability of Kyrgyz state to fulfill the access to food was critical due to the absence of basic economic structures and fundamental institutions. In the environment of the collapse of the Soviet economy, the Kyrgyz Republic demonstrate a sharp decline of the national economy (See Figure 5). The lowest GDP level was reached in 1995. Economy starts to recover gradually starting from 1996. Such strong decline of national economy led to increasing the share of agriculture in the economy to 50% in 1996 and employment in agriculture reach 54% (See Figure 1). According to estimates the pre-transition level of GDP per capita in terms of purchasing power wasn’t yet fully recovered.

The last decade in Kyrgyzstan characterized by gradual improvement in economic performance in terms of population well-being. The purchasing power of population improves on 40% between 2005 and 2016. However, there were two waves of the

16 Ministry of Economy of Kyrgyz Republic  
increase in the share of food in the total household consumption in 2008-2009 and in 2012. The lowest share of food in household consumption observed in 2011 – 47%. During last few years indicator shows a slow decline.

Figure 6. The share of food in total household consumption\textsuperscript{17} in Kyrgyzstan in 2005-2016, %

![Graph showing the share of food in total household consumption in Kyrgyzstan from 2005 to 2016.]

Source: National Statistical Committee

At the same time, the share of food in total consumption was fluctuating with the overall trend to gradual decline - from 56% to 52% between 2005 and 2016. It is interesting that in the observed period the gap between rural and urban households in food expenditures to the consumption costs almost diminished over time. The expectably higher proportion of food in the urban households’ consumption over time become closer to the share of food in the rural households’ consumption. Practically there is no difference in a ratio of household consumption between urban and rural households after 2010.

Figure 7. Prevalence of undernourishment in Kyrgyzstan and neighbor countries in 1999-2016, %

![Graph showing the prevalence of undernourishment in Kyrgyzstan and neighbor countries from 1999 to 2016.]

\textsuperscript{17} Household consumption includes expenses on food items, non-food items and services. It doesn’t include taxes and other costs.
Improvement of the national well-being transformed to a better level of food access. It observed in the dynamics of the decline of undernourishment in Kyrgyzstan over the last two decades (See Figure 7). Undernourishment in the country declines from 16.3% to 6.4% between 1999 and 2016. It is noticeable that comparison with the neighbor Kazakhstan indicates that the gap between countries become smaller. At the same time, undernourishment in Tajikistan is on the much higher level.

**Figure 8. Poverty indicators in Kyrgyzstan in 2000-2016, %**

![Poverty indicators in Kyrgyzstan in 2000-2016, %](image)

Source: World Development Indicators

**Figure 9. National poverty rate dynamics in Kyrgyzstan in 2005-2016, % of the population**

![National poverty rate dynamics in Kyrgyzstan in 2005-2016, % of the population](image)


One of the main indicators of the better access to food is the poverty dynamics in the country. It is even more important taking into account the share of food costs in the total household consumption. The overall poverty dynamics in the country demonstrate about the remarkable improvement of the well-being of the population in the country.
International based indicators of the poverty indicate the improvement from 77.6% in 2000 to 19.1% in 2016 ($3.2 USD/person/day PPP). The lower level indicator ($1.9 USD/person/day PPP) optimistically shows almost full alleviation of poverty in the country.

The dynamics of the poverty alleviation was not uniform during the observed period of time. The most of the progress reported between 2000 and 2009. After that period improvement shows controversial volatility with the trend to slow improvement.

Analysis of poverty rate according to national standards of living shows less optimistic data with the same trends. During last decade poverty in the country declines from 43% to 25%. Urban poverty as it is expected lower than rural. However, over time, the difference between rural and urban well-being declined with certain volatility in some years.

**Figure 10. Regional poverty rate dynamics in Kyrgyzstan in 2007-2016, % of the population**


Regional poverty pattern indicates the uneven distribution of welfare in the country (See Figure 10). South Kyrgyz Oblasts – Osh, Jalal-Abad, and Batken- are poorest regions in the country due to the high density of population, the low potential of local labor opportunities and scarcity of natural resources - land and water. Naryn Oblast is the poorest in the central part of the country due to high elevations and severe climate, remoteness and weak infrastructure. Issyk-Kul Oblast demonstrates high poverty indicators followed by further improvement in the last three years. Chui and Bishkek (capital) is the most developed region in North Kyrgyzstan with the favorable dynamics.
of poverty indices over the past decade. One of the interesting poverty dynamics demonstrates Talas Oblast - since 2013 the region demonstrate stable improvement of poverty indicators and became the least poor region in the country (except Bishkek). Such poverty decline at the regional level explained by the development of production of the new commercial export-oriented crop – kidney bean. A special case of a kidney bean impact on a rural area is presented further.

In Kyrgyzstan significant share of the state budget is devoted to the social sphere. In 2014, the state plans to spend 59 billion Kyrgyz soms (53.7% of the country budget) for a social and cultural sphere, including education, health, social protection, housing and utilities, recreation, cultural and religious activities, protection of the environment. Social protection area is one of the focus areas of state political agenda. There are exist a comprehensive legal framework providing social protection of vulnerable people in the country.

Table 5. List of Laws and legal documents regulating Social Services and Protection of Kyrgyz Republic

<table>
<thead>
<tr>
<th>#</th>
<th>Years</th>
<th>State Procurement of Social Services</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2008</td>
<td>The Law of the Kyrgyz Republic on State Procurement of Social Services SPSS</td>
</tr>
<tr>
<td>2</td>
<td>2009</td>
<td>Regulation on the procedure for conducting a competition for social programs (projects), approved by the Resolution of the Government of the Kyrgyz Republic as of January 24, 2009 #41</td>
</tr>
<tr>
<td>3</td>
<td>2011</td>
<td>Methodological guidelines for organization and conduct of the competition of social projects approved by the order of the Ministry of Social Development of the Kyrgyz Republic as of October 13, 2011 #175</td>
</tr>
<tr>
<td>4</td>
<td>2009</td>
<td>Instructions for monitoring the quality of social services provided by NCOs in the framework of state procurement of social services, approved by the order of the Ministry of</td>
</tr>
</tbody>
</table>

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19 USAID (2013) Analysis of State Procurement of Social Services in the Kyrgyz Republic and Recommendations for its Improvement, Bishkek, Kyrgyzstan

20 Ibid
<table>
<thead>
<tr>
<th>No.</th>
<th>Document Title</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Order of the Ministry of Social Development as of June 30, 2011 #127 on Approval of the Contract for Implementation of the State Procurement of Social Services</td>
<td>2011</td>
</tr>
<tr>
<td>3.</td>
<td>Law of the Kyrgyz Republic &quot;On the guaranteed minimum state social standards&quot; as of 26.05.2009 #170</td>
<td>2009</td>
</tr>
<tr>
<td>4.</td>
<td>A list of guaranteed social services to the population of the Kyrgyz Republic (approved by the Government of the Kyrgyz Republic as of 27.05. 2011 #255)</td>
<td>2011</td>
</tr>
<tr>
<td>5.</td>
<td>Strategy for the development of social protection of the population of the Kyrgyz Republic for 2012-2014 (approved by the Prime Minister's office of the Kyrgyz Republic as of 13.12. 2011 #755)</td>
<td>2011</td>
</tr>
<tr>
<td>6.</td>
<td>Regulation on the assessment of needs of the population in social services at the local level (approved by the Government of the Kyrgyz Republic as of 2.08. 2012 #535)</td>
<td>2012</td>
</tr>
</tbody>
</table>

**Source:** USAID (2013)

The comprehensive legal framework creates a basis for providing social services of different kinds including social protection function. It includes shelters, pensions, and allowances. If pensions system covers almost entire country population, the system of allowances and shelters cover most poor and vulnerable people in the country. There are six ways of social protection of the population:

- monthly allowance for low-income families with children
- monthly social allowance for disabled citizens
- pensions for disabled citizens
- monetary compensation in return for benefits
- social services provided to vulnerable groups of the population
- payments on social insurance to working citizens.
8% of the population receives allowances in 2011\(^{21}\). 10% of the country population receives retirement pensions. The special focus in the social protection system directed toward the protection of children. In 2011 more than 400 thousand children receive allowances (18.4% of all children in the country)\(^{22}\). Most of them (89.5%) receive allowances in the very small size – 370 Kyrgyz som per kid/ monthly (8 US dollars\(^{23}\)). The system criticized but attempts for reforming faces serious resistance among people and many politicians in the country.

*Food Stability* in Kyrgyzstan might be explained by the following availability of the main food items in the country based on their domestic production and ability to import it in a sustainable manner over time.

In the country, bread and products produced from flour are the main sources of energy intake due to historically defined national cuisine. In pre-transition period a significant amount of grain supplied to the country, which was an integer part of Soviet Union. There was a slump decline in the consumption of food-grains in the 1990-1995 (See Figure 11).

The annual per-capita grain consumption consists of direct (human consumption) and indirect (consumption by livestock and other industries) components. It declined almost two times - from 583 kg (1990) to 259 kg (1995). This decline was mainly occurred due to falling in food-grain imports, though there was also a lesser fall in the per-capita domestic food-grain production from 332 Kg in 1990 to 199 kg in 1995.

*Figure 11. Annual Per Capita Production and Consumption Food Grains and Feed in Kyrgyzstan in 1990-2015, kg/per capita*
During the second half of the nineties due to the expansion of the wheat share in crop production the gradual and partial recovery of grain consumption occurred. It improved to 370 kg in 2015. The dependence of domestic consumption from the wheat import declined from 40% in 1990 to 6% in 2002. The main driver of the decline in the grain consumption in the economy was the reduction of feed demand from the domestic livestock sector. The feed consumption per head of animal fall from 383 kg in 1990 to 123 kg in 1995. It recovered slowly to 168 kg (2015). Such shift in the consumption led to declining of production and consumption of livestock products since the 1990s and partially recovered by an increase of production and consumption of potato. It supports the maintenance of energy intake of food diet but decreases the protein intakes.

Besides own domestic production, one of the opportunities for a stable food supply is the import of the food items required in Kyrgyzstan. The recommended indicator is the ratio of the domestic food supply that has been imported indicate on the prevalence share of import of food over the domestic production and import of food with the exclusion of exported foodstuff (see Figure 12 and Table 4). The dynamics of the indicator demonstrate that ability of the own domestic production to satisfy the needs of the population declined during last 15 years. Indicator lowered from 14 to 29% in Kyrgyzstan and from 17 to 40% in Tajikistan. At the same time in Kazakhstan, that ratio is stable at the level of 4-5%.

Source: own estimations, Foreign Agriculture Service, USDA
Figure 12. Value of food imports over total merchandise exports in Kyrgyzstan and neighbor countries, %

Source: FAO Food Security Indicators

Figure 13. Personal remittances in Kyrgyzstan and neighbor countries in 2002-2016, % of GDP

Source: World Development Indicators

One of the main sources of the recovery of the trade deficit of the food supply as well as the overall trade deficit is the personal remittances received from the labor migrants working abroad. For Kyrgyzstan and Tajikistan, that figure is a remarkable due to the high proportion of the people working as labor migrants abroad and relatively small size of the national economies. Moreover, that inflow becomes a determinant of the country’s ability to trade internationally. After oil crisis and followed currency depreciation in Russia Kyrgyz and Tajik migrants decrease the remittances to the country and it seriously affects the sustainability of the national currencies and led to the national
currencies depreciation and decline of the import of goods to the countries in 2014-2015. In Kazakhstan, remittances are not significant and stability supported by the significant high export of own grain to the neighbor countries markets.

**Figure 14. Per capita food supply variability in Kyrgyzstan and neighbor countries, %**

![Graph showing per capita food supply variability in Kyrgyzstan and neighbor countries](chart.png)

**Source:** FAO Food Security Indicators

The per capita food supply variability compares the variations of the food supply and trends demonstrated by Kyrgyzstan shows high fluctuations at the beginning of 2000. Further, the indicator variations declined and during last years shows the lowest level among three countries. Tajikistan demonstrates the lowest variability during almost all periods except last two observable years. In Kazakhstan indicator shows a decline and further growth in the last years. The trends demonstrate increasing the stability of a food supply over time in Kyrgyzstan. However, the situation with the food consumption or overall food price change is not clear from that trend.

**Food Utilization** is an important feature of the food impact on the health of the population. There are several indicators demonstrating the different dimensions of food utilization. One of the important features of the food utilization are the proportions of children affected by wasting and stunting (See Figure 15). The number of children who are stunted in the country much higher then affected by wasting. Positive trend observed in stunting after 2009 highest level. The increase of stunting among children might be caused by the Food Crisis impact, because of the growth of food prices in the country and at the global level too. Indicator declined in 2012 and continued the trend in 2014. At the
same time wasting level is lower and demonstrate a trend to a certain stagnation.

Figure 15. Children under 5 years of age affected by wasting and children under 5 years of age who are stunted in Kyrgyzstan in 2006-2014, %

![Figure 15](image1.png)

Source: FAO Food Security Indicators

Figure 16. Children under 5 years of age who are stunted in Kyrgyzstan in 2006-2012 for the national, urban-rural strata and by gender disaggregation, %

![Figure 16](image2.png)

Source: WHO Indicators

Exploration of the indicator by different strata given in Figure 16 for 2006, 2009 and 2012. It shows that indicator growth of 2009 explained by the significant growth of stunting among rural children during growth of food prices, urban children measurement shows lower growth. Another visible trend is a higher stunting for boys than for girls.

Figure 17. Children under 5 years of age who are stunted in Kyrgyzstan in 2006 and in 2012 by regions, %

![Figure 17](image3.png)
Regional pattern of stunting available for 2006 and 2012 only. Highly positive trends observable for Talas and Issyk-Kul Oblasts (regions). A moderate decrease of indicator characterizes Chui Oblast. The indicator is almost the same for Naryn area, while few regions show an increase of the stunting - Bishkek, Jalal-Abad and Osh Oblasts. Stunting in Osh city measured for the first time in 2012 demonstrate the highest level in the country - 30%.

Evidently south regions of the country characterized by a higher level of stunting. More attention required to update the issue of the disparity by regional, urban-rural and gender parameters. Also, unfortunately, there isn't any information on the ethnicity of the stunting of children.

Another informative indicator is the ratio of the people with the weight higher than optimal level. It is a common trend that with the growth of the well-being the number of people affected by obesity increased. Such trend observed for the children, adolescents, and adults too. One of the main causes of obesity is the improper diet based on unbalanced consumption of the harmful substances. The study of the street food demonstrates that unhealthy diet might be the reason for obesity and related problems affecting the health of the population. Main unhealthy substances found in the regular street trade includes in excessive level such substances as sodium, potassium, trans-fatty acids, sugar. Healthy food propaganda needs to be prioritized in the public policy areas.

Source: WHO Indicators

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with the improvement of legal technical regulations\(^\text{25}\).

The obesity among children increased over time in Kyrgyzstan Despite the relatively low level of obesity – 3.9% in 2016 – the trend demonstrates an evident tendency to a future growth (See Figure 18). It is interesting that obesity is widespread among boys rather than among girls.

**Figure 18. Prevalence of obesity among children and adolescents in Kyrgyzstan, 5-19, in 2000-2016 (%)**

![Figure 18. Prevalence of obesity among children and adolescents in Kyrgyzstan, 5-19, in 2000-2016 (%)](image)

*Source: WHO data*

**Figure 19. Level of adults who are overweight/obese in Kyrgyzstan and neighbor countries in 2000-2014 (%)**

![Figure 19. Level of adults who are overweight/obese in Kyrgyzstan and neighbor countries in 2000-2014 (%)](image)

*Source: FAO Food Security Indicators*

\(^{25}\) Ibid
The trend of increasing obesity in Kyrgyzstan is widespread among adults (See Figure 19). During 2000-2014, the trend of overweight/obese among adults increased from 8.1% to 13%. The growing trend observed in neighbor Kazakhstan and Tajikistan. In Tajikistan overweight is lower than in Kyrgyzstan. The gap between Kyrgyzstan and Tajikistan is stable at the level of 2%. The difference between Kyrgyzstan and Kazakhstan slowly increased over time. The level of population faced overweight and obesity in Kazakhstan reach the level of 22.8% in 2016.

**Figure 20. Level of adults who are obese in Kyrgyzstan by gender, in 2009-2016 (%)**

Gender disparity in obesity in Kyrgyzstan shows the gap between women and men. Need to notice that the gap between women and men is not stable – the difference between males and females declined after 2013. Most of the growth in obesity in Kyrgyzstan originates from the trend of increase in obesity among males. It becomes an urgent policy issue to include the problem of unbalanced diet, which may lead to numerous problems with the health of the nations in Kyrgyzstan and neighbor countries too.

### 3. Challenges to Food and Nutrition Security

#### 3.1. Food Security and Nutrition (FSN) Development in Kyrgyzstan

Traditional Food Security and Nutrition concept analyses the situation from the different...
the Soviet period of development. At least there is very few information about the poverty study in the pre-transition period in Kyrgyzstan. According to the available data, the poverty estimation at the end of the Soviet period in Kyrgyzstan was around 33-35%. The main policy issue at the beginning of transition was to reform centralized control system to a market economy. As a result in the mid-90th, the sharp reduction in subsidies in the overall economy and agriculture particularly observed. It led to a significant decline in the population wealth (See Figure 5). GDP declined two times in 1995 compared with 1990. In Kyrgyzstan, poverty rate from 35% in 1993 increased to 64% in 1999. The significant part of the population lives in a situation close to hunger 32.9% of the population lives below extreme poverty line (undernourishment or hunger line) in 2000.

Kyrgyz Government with the support of the European Council adopted a national policy of the Kyrgyz Republic Food Security (Resolution # 585 on October 26, 1999). Four pillars of food security (availability, stability, efficient use of and access to food) had already declared as the basis of this policy. This policy document provides a definition to food security at the national and regional levels as well as at the household level. The strategic priorities of agriculture were identified: agrarian and land reform, marketing reform, access to credit, processing of agriproducts institutional strengthening, natural resource management, development of extension services and improved seed production. As main priorities were also defined social security and healthcare, emergency situation readiness, macroeconomic stability, and public finance.

Food security situations demonstrate an improvement during 2000-2007. Therefore during that period, there wasn't any further development in the support of the food security system. The progress was achieved due to the impact of the agrarian reform implemented at the end of 1990th and also due to the development of trade and service sector and labor migration to Russia (See Figure 13).

Practically Kyrgyz Government implement cost-minimizing strategy towards supporting food security and nutrition system. Naturally, an observable improvement was not

sustainable facing Food Crisis after 2008. It led to a rising of food prices and followed inflation and 2008 and 2011 (See Figure 21). However, in the recent years, it is on the moderate level again. The high food prices in the world markets combined with the high dependency on food imports led to a strong association between global and domestic price fluctuations. The population followed to economic shocks as well as macroeconomic problems related to the balance of payments. The decline of poverty in 2008-2012 was also arrested due to worsening of food dependency, specifically of the urban population (See Figures 6 and 9).

**Figure 21. Consumer Price Index and Food and Beverages Prices Fluctuation in Kyrgyzstan in 2006-2012, % to the previous year**

![Figure 21](image_url)

*Source: National Statistical Committee*

**Figure 22. Wheat Crops Dynamics in Kyrgyzstan in 1990-2016, thousand ha**

![Figure 22](image_url)

*Source: National Statistical Committee*

Kyrgyz population becomes vulnerable to the food price fluctuations due to the strong
dependence on imported wheat. The strong increase in the food prices did not affect strongly on the farmer’s behavior towards wheat cultivation. The wheat crops increased by 10-11% in 2008-2009 and further did not demonstrate further increase (See Figure 22). Currently, wheat crops become close to the pre-transition level of early 90th. The dependence from agricultural income and food prices fluctuation impact compensate significantly by the growing importance of remittances (See Figure 13), which is a growing source of an alternative income to the country population after 2007. Another remarkable peculiarity is the trend to a higher volatility of urban poverty, which reaches the maximum level of 35% in 2012 (Figure 9).

The rising influence of food prices with an absence of cheaper imports reflects a new range of challenges which required urgent policy interventions. The Government of the Kyrgyz Republic adopted the Law “On Food Security in Kyrgyz Republic” (#183, August 4, 2008) to address the basic directions for food security in the country in accordance with minimum standards of food consumption. The other policy interventions include:

- domestic wheat procurement and distribution of wheat flour to food-insecure population,
- re-building strategic food reserve stocks, wheat, and wheat flour mainly,
- provision of credit subsidies to farmers,
- introducing seasonal duties on wheat and wheat flour exports,
- supporting the use of agricultural machinery and improvement of wheat seed production.

Technical assistance and direct support of many donors and foreign states support efforts of the Kyrgyz Government in the period during and after Food Crisis. Few examples of such support included:

- With the FAO assistance, food price monitoring system on a daily basis was developed (EU grant),
- USAID supports in purchasing wheat seeds and fertilizers in 2010,
- World Food Programme (WFP) report on the spending of almost US 6 million dollars in 2010 supporting the vulnerable people food distribution to 552

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29 European Union (2016). Kyrgyz Republic Cooperation for Development
thousand people in the south inter-ethnic conflict and 295 thousand people across the country. 

- WFP supports school food system establishment in the pilot schools.

The National Strategy for Sustainable Development for 2013-2017, define spheres of agricultural development and food security as a major challenge for the further economic development of Kyrgyzstan. According to the Food Safety Law, the Food Security Council has activated its efforts to address food insecurity in the country. Work of food policy experts, ministries, and other responsible state agencies led by the Food Security Council and supported by FAO assisted in developing the Food Security and Nutrition Program (FSNP) and the Action Plan for the period 2015-2017. It was adopted by the Decree of the Government of the Kyrgyz Republic No. 618 on 4 September 2015. The FSNP is a result of joint work of various agencies and stakeholders that lead to its conceptions and formulation of the definitions of goals and priorities, analysis of financing requirements, and the provisions of monitoring and evaluation of implementation, thereby, inducing accountability of the implementing agencies. The main ideas of the Program were the definition of new target indicators aimed at improvement of nutrition quality and health of the population and to harmonize domestic food and nutrition safety.

The program provides a detailed analysis of the four pillars of the food security and nutrition concept - food availability, access to food, balanced nutrition, utilization, and stability (control and supervision of food chain).

Planned implementation of the FSNP was oriented on the involvement of three components: the formulation of the state policy on food safety and nutrition issues; financing from various sources; and monitoring and evaluation of the Program. The primary state stakeholders in a Program are the (i) Food Security Council (Vice-Prime-Minister of the Government), (ii) Ministry of Agriculture and Melioration, (iii) Ministry of Economy, (iv) Ministry of Health Care and (v) Ministry of Finance (funding decision maker). The Action Plan must support the program through making the process more manageable through a regular assessment of the impact of actions by state agencies.


Approved by the Kyrgyz Republic President’s Decree # 11 dated January 21, 2013
stakeholders, the inclusion of a private sector and defining of sources of funding for a Program realization. However, some of the targets are done on a regular basis (e.g. price monitoring data collection and reporting), others are lagging behind. Condensed timelines and unrealistic targets, in an environment of funding constraints, makes many tasks unrealistic and require regular revisions.

There are several critical aspects plays a negative role in the Program failure. One of the biggest issues is the low capacity of the Government to finance the program. The program requires 2.3 billion Kyrgyz som, while confirmed supply was 1.2 billion som only. Uncovered 45% of financing was an unresolved issue. Within the confirmed budget share of Kyrgyz Government was 3% only (33.6 million som). It was supposed that the donor community will cover the gap.

The second important issue is a condensed unrealistic timeline. The timeline of 6 to 24 months for such comprehensive actions to be completed was unrealistic. Most of the planned activities, analysis and policy dialogues, and capacity buildings have been missing for a long period of time or never done earlier. As examples might be provided such actions as the purchase of sugar beet, developing a series of analytical products, storage construction, information campaigns, updates in the curriculum of educational institutions, the building of new laboratories. The funding constraints contribute to the low realism of meeting these timelines.

The third problem of the Program is that the Action Plan does not clearly define the role of the private business and civil sector organizations. It creates barriers to the better understanding and inclusion of the forces of civil society to be involved in the translation of the policies to action on the ground in a realistic manner.

The final issue is the insufficient development of analytical capacities that must accompany the implementation of the FSNP. The continuous monitoring of food prices is functional, but many other tasks of analytical actions like surveys and needs assessments have not been undertaken by civil service. This gap was a crucial challenge to the policy-making and implementation process.

The development of the main policy documents reflecting changing policy reflection agenda presented in Table 6. It shows the main policy decision process documents defining the policy directions of the food security and nutrition issues. The extended list
of the laws and other legal documents regulating different aspects of food security and nutrition system presented for information in the Attachment 1.


<table>
<thead>
<tr>
<th>Name of the Policy/Program</th>
<th>Name of the Responsible Body</th>
<th>Main Objective</th>
<th>Implementation Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decree of the Government of the Kyrgyz Republic “On the National Policy of Food security of the Kyrgyz Republic” of October 26, 1999, No. 585</td>
<td>The Government of the Kyrgyz Republic and responsible ministries</td>
<td>Establishment of the four principles of food security – availability, stability, effective use and access; levels of food security – national, regional and household</td>
<td>1999-2008</td>
</tr>
<tr>
<td>the Decree of the Government of the Kyrgyz Republic “On the measures for the further realization of the National policy of the food security” of April 25, 2001, No. 193</td>
<td>Government Commission on Food Security (Head- Vice-Prime-Minister)</td>
<td>Definition of the matrix of the actions of Program “Food Security 2000” implemented as a pre-requisite of the support from European Commission</td>
<td>2001-2002</td>
</tr>
<tr>
<td>Decree of the Government of the Kyrgyz Republic “On the realization of the Program “Food Security - 2001” of August 13, 2002, No. 558</td>
<td>Commission on the management, monitoring, and support of the Program (Head-Vice-Prime-Minister)</td>
<td>Definition of the list of foods security items; the matrix of the reform implemented as a pre-requisite of the support from European Commission</td>
<td>2002-2003</td>
</tr>
<tr>
<td>The Law of the Kyrgyz Republic “On Food Security of the Kyrgyz Republic” of August 4, 2008 No. 183</td>
<td>Food Security Council (Head-Vice-Prime-Minister) and responsible ministries</td>
<td>Definition of food security situation, list of key 9 products, the definition of a level of physical and economic access to food, the necessary level of production, action measures at food crisis situation</td>
<td>2008 – to present</td>
</tr>
<tr>
<td>Decree of the Government of the Kyrgyz Republic “On the defining of the average physiological</td>
<td>Ministry of Agriculture of Kyrgyz Republic</td>
<td>Defining of the average physiological norms of consumption of the main food</td>
<td>2010- to present</td>
</tr>
</tbody>
</table>
3.2. Environmental and Climate Challenge Related to FSN in Kyrgyzstan

The environmental issue is an important aspect of the direct impact factor of the agricultural production for production of crop yields, but also feed for a livestock production taking into account a potential risk of the climate change. The climate change potentially may affect the irrigated and non-irrigated areas. In Kyrgyzstan, approximately 80% of the arable land irrigated (from 1.27 million hectares irrigated 1.02). The change of indicator over time almost doesn't change\textsuperscript{33}.

\textbf{Figure 23. Arable land unused in Kyrgyzstan in 2008-2017, \%, thousand ha and due to the destruction of irrigation canals}

From the available arable land certain amount of land unused due to different reasons (See Figure 23). During the observed period around 100 thousand hectares of land unused for agriculture. The biggest share of unused land was observed in 2009 - 122 thousand hectares or 10% of the land in the country. However, this trend is declined over time and during last few years unused land share declined to the level of 6-7%. From unused land, a certain share of land does not cultivate due to the destruction of the irrigation network - in the condition of the decline of unused land the share of unused due irrigation absence increased up to the level of 15-16% - from 12 to 14 thousand hectares. 4-5 thousand hectares located in Naryn, 2.5-3 thousand in Issyk-Kul, 2 thousand in Batken. All of those areas are suffering from poverty rates higher than average and therefore it should be in the in the center of the agricultural policy agenda.

The Program of the Irrigation Development on 2017-2026 was developed and approved by Kyrgyz Government in 2017. It defines the most urgent needs in the rehabilitation of irrigation system in the country. The financial needs of investment were assessed around 58.8 billion Kyrgyz som (860 million US dollars). There are three priorities in the program:

- 17 most urgent irrigation units - 4.9 billion som;
- 16 proposed irrigation units – 36.3 billion som – discussed with the donors;
- 122 uncovered irrigation units – 17.6 billion som – to be defined.

The Program defines the areas covered and uncovered from different sources, but
Unfortunately, it didn’t describe as the main priority in agriculture in the medium-term country program “Unity, Trust, Creation”. There is small section defines the necessity to continue to work in the area of irrigation, but there is no reference to the program and no financial requirements. Need to specify that without functioning of irrigation system crop production will be impossible on the most of the territory of the country. Sufficient resources are needed to be invested not only from Kyrgyz state but also from the international development side. That gap needs to be reconsidered from the side of Kyrgyz Government to reach substantial sustainability in terms of adaptation to the changing climate conditions affecting food security and nutrition situation in the country.

4. The Existing FNS Policy Framework

The chapter presents the results of the qualitative interviews and special case study – kidney beans. Qualitative interviews cover different types of stakeholders representing the peculiarities of the current stage of development of Food Nutrition and Security Policy state.

4.1. FSN Stakeholders Study

The representation of the main definitions and terms, forces, and drivers for food and nutrition security policy recognized differently depending on the typology of the covered stakeholders. Therefore the two completely different groups of stakeholders provide different views of the situation with the FSN policy. The list of the stakeholders covered presented in Attachment 2.

The first group of stakeholders includes policymakers – public state agencies officials and food security experts (further- ‘policy experts’). Their view is based primarily on the normative understanding of the legal framework and more clearly linked to the definitions reflected in the legal basis and/or in the international definitions34.

The policy experts reflected a vision based on the four main priority areas for food and nutrition security. 

34 The difference between definitions in the legislation and international norms are not significant due to the fact that the Law on Food Security was created with the technical assistance of the development organizations.
nutrition security policy in the Kyrgyz Republic according to the main pillars: food availability, access, nutrition, and safety. Therefore priorities formally recognized exactly as it is represented in the Food Law “On Food Security” adopted in 2008\textsuperscript{35} and the Food Security and Nutrition Program (FSN Program) adopted in 2015 (See Table 6). The inclusion of nutrition issue in the law happened at the beginning of 2017. It happens due to the inclusion of that action in the FSN Program. It simply bringing the Law in accordance with the Program.

The perception of public agencies representatives reflects the main formal frameworks defined for the state agencies reflected in the legislation. The definitions of the food security and nutrition terms are obtained by public bodies according to the national legislation. The priorities listed in the Law, define for the Ministry supported for the Government Decree # 138 "On approval of the regulation on monitoring of food security and indicators of food security of the Kyrgyz Republic" dated March 3, 2009. The Decree establishes a monitoring system and defines a list of indicators, the procedure for collecting, processing and analyzing information. In accordance with this Decree, the Ministry\textsuperscript{36} determines the degree of food security in Kyrgyzstan on the quarterly periodicity in accordance with the production of the volume of basic food products. List of the basic products: bakery products in terms of grain; potatoes, vegetables, fruits and berries, meat, milk raw, sugar, egg, vegetable oil.

National Statistical Committee provides an information on a regular basis for the responsible state bodies and makes analytical reports for a public access too\textsuperscript{37}. Quarterly bulletins include the main definitions adopted from the Food Security Program of European Union and provides an overview of indicators on the following areas:

- Information on the indexes (Consumer price index) and main food items and groups of food,
- Availability of food produced in the country - crop and livestock,
- Agricultural food prices,

\textsuperscript{35} There are few changes in the Law in 2017 basically including the norms on the healthy nutrition (definition, tasks and responsible agency) - Law # 28 on January 17, 2017 “On the changes in the Law “On Food Security of the Kyrgyz Republic”.

\textsuperscript{36} Ministry - Ministry of the Agriculture, Food Industry and Melioration of the Kyrgyz Republic

\textsuperscript{37} National Statistical Committee (2018) Informational Bulletin of Kyrgyz Republic on Food Security and Poverty. Quarterly Issue, ISSN 1694-7274
• Food Availability data - trade data on import and export of food, consumption data per capita for main food categories.
• Access to food - Consumer price analysis for the main food items,
• Population income data,
• Additional data - data on livestock, data on meteorological conditions in the country, food balance for the main food items (according to the last issue).

Food Balance situation in the country expressed in nutritional values and compared to calculated daily needs based on surveys of daily intake and on calculated daily needs based on recurrent nutritional surveillance calculated on the quarterly basis for the whole country and in regional representation, for the different age groups and different income groups. Besides energy intake information provided in terms of provision of protein and fat\textsuperscript{38}.

The perception of the food security in the public domain and the decision-making process are the tasks defined and controlled by the Government. The key Government bodies and ministries for the Program implementation are:

(i) Food Security Council (under the Vice-Prime-Minister of the KR Government)
(ii) Ministry of Agriculture, Food Industry, and Melioration
(iii) Ministry of Economy
(iv) Ministry of Health, and
(v) Ministry of Finance (funding decision-making agency)

There are three main constraints were noticed by public officials regarding the problems with the implementation of the FSN documents, programs and requirements:

1. Limited financial resources. The current funds are limited base on the Republican budget defined by the Ministry of Finance and approved by Jogorku Kenesh (Parliament). As it was noticed in the FSN Programme state funds are minor and depends significantly on the inflow of funding of development organizations.

2. Inter-agencies cooperation is insufficient. Many actions in the legislation and FSN Program requires implementation of work by the number of different state bodies. Since there is no significant experience and absence of the clear

\textsuperscript{38} Ibid
management process it takes a lot of time to coordinate the actions of responsible bodies.

3. There are many tasks in the FSN program introduced for the first time by the state bodies and there is no exist a methodological base, enough trained specialists, and technical expertise to fulfil many of the tasks, e.g. Program on the adaptation of agriculture to the climate change, investment projects for the greenhouses, implementation of the ‘cooling’ value chain for the milk products etc. As a result, there is not enough state bodies capacity to initiate and support the number of the planned actions.

The current status of FSN Program is out-of-date because it is expired at the end of 2017. There are many actions planned fulfilled, like the establishment of new laboratories, implementation of animal identification system (for the cattle), but there are a lot of actions remained incomplete.

Very specific example, the introduction of "Gulazyk" micronutrient additive has not met the targets due to issues of fund shortages as revealed by the mid-term evaluation by the Ministry of Healthcare39. Later this initiative was excluded from the action plan of the Ministry of Healthcare and in the draft of the new Program of the Government of the Kyrgyz Republic for the Protection of Public Health and Development of the Health System for 2019-2030, this measure already did not include. The international donor original intention was that this additive will be purchased from the donor sources and will be distributed for free. This scheme work during 2010-2013, then Kyrgyz Government planned to do it from the country budget. Unfortunately, there was a scandal in the Jogorky Kenesh (Parliament) regarding some harmful effect on kids. Even if it was further any evidence on the matter, the plans of the Government was abolished after strong opposition from Kyrgyz political groups in the Parliament.

Need to notice implemented tasks by Kyrgyz Government during 2009-2014 prior to the introduction of FSN Program (e.g. information system, monitoring of food balance, food reserves, etc.) originate from the urgent actions established by the Government during 2008-2009 Food Crisis response. During the recent years it is noticeable that despite of

the growth of inflation in 2013-2015 (See Figure 18) and certain issues with food security the situation is not so dramatic and during the last few years the urgency of the FSN state kept low attention on the public discussion domain due to the improved stability on the food markets, mainly caused by the stable global and Central Asia regional food prices. Efforts of the population in the country support to improve the situation – growth of service sector and construction and remittances too. Low inflation also supports an improvement of food security indicators.

Agricultural development strategy is a strategy oriented on the development of the sectoral branches - livestock and crop production, processing industry and supporting state services – irrigation, veterinary system, quality production requirements, seed policy and applied research development. While FSN system oriented on the whole society, agricultural strategy oriented on the development of the sectoral economic capacities of the agricultural production and services. The draft of the new strategy of agricultural development up to 2040 presented currently for discussion on the website of the Kyrgyz Government40.

The observations and opinions of the non-governmental policy experts are different from the public official’s point of view. The basis for the definitions, terms and decision-making process are the same legal framework, but the opinion raised is the low level of implementation of the situation with certain aspects related to the fulfillment of the laws and potential impact on the food security and nutrition issues. As an example is a state with the fulfillment of the Law of the Kyrgyz Republic “On the fortification of flour” dated March 11, 2009, N 78. The Law established a norm for adding to the all flour produced in the country of special additives – premixes, containing a set of micronutrients, specifically covering iron deficiency anemia and a deficit of folate and vitamin B12. The main idea is to provide a set of measures to decrease the health of the children and pregnant women by adding such substances to the flour to make it available through the most common product consumed by vulnerable strata of the population.

However, practice shows that the Law covers the domestic production of the flour of the highest and the first grades of the flour. But on the domestic market also produced the flour of the second grade, cheapest flour available for poorest people. Besides that many

40 http://www.gov.kg/?p=117304&lang=ru

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farmers still, produce a lot of own wheat. The part of that wheat used for the self-consumption and did not cover in the official statistics, because since the 90th in many rural areas still exists mini-mills of the low production capacities (less than 1 ton per day). Many of that mills did not register and those who are registered work on the patent base administration, which did not require reporting and book-keeping. As a result, there are exist big unofficial flour production, with the low production monitoring accessibility.

Another problem is the big share of flour imported from Kazakhstan. Kazakhstan has own legislation on the wheat flour fortification, which standards did not harmonize with the Kyrgyz legislation. Another issue that Kazakh wheat dedicated to export no need to be fortified. As a result, almost all wheat flour came from Kazakhstan wasn’t fortified. At the end of 2017 Kyrgyzstan introduce the ban for import unfortified flour of Kazakhstan origin. Need to notice that significant amount of the trade between Kyrgyzstan and Kazakhstan are not official and flour continued to enter on Kyrgyz market inofficially. The controlling and monitoring costs for the fulfillment of the legal norms are big and responsible state actors are not always able to implement it due to financial and administrative constraints. As a result, there is no information on the actual share of the fortified flour consumed by people in the country. The gap between the actual and legal norms in the fortified flour case and many other areas is significant.

There are additional issues raised by the non-governmental policy experts – absence of the linkage with the strategic country documents (Long-term National Development Strategy of the Kyrgyz Republic\(^\text{41}\) and mid-term program of development of the Kyrgyz Republic for the period 2018-2022 “Unity. Confidence. Creation.»\(^\text{42}\)), introduction of the focus of the climate change oriented agriculture, development of organic agriculture cluster for a better nutrition clusters, introduction better nutrition practices for school food system etc. Those non-governmental policy experts often associated with the certain NGO supported by the development organization, keeping mandates for the selected SDG (Sustainable Development Goals) - FAO, UNDP, WFP etc.

The second group of stakeholders includes *private sector* (further- ‘private experts’). Their

\(^{41}\)http://www.president.kg/ru/sobytiya/novosti/6015_proekt_nacionalnoy_strategii_razvitiya_kirgizskoy_respubliki_na_2018_2040_godi

\(^{42}\)http://www.gov.kg/?p=117456&lang=ru
view is based primarily on the applied practices rather on a normative understanding of
the legal framework and directly linked to the economic agent's rational behavior. There
are two groups of private agents were covered - farmers and food processing businesses.
Farmers interestingly reflect the dual character of smallholder economic agents who
partially consumes produced goods and partially oriented on the market signals. The
representative of commercially oriented farmers includes kidney bean farmers, wheat
farmers, and livestock farmers. Food processors have mainly established businesses with
the certain food processing – mill and fruit processing plant (dried fruits).

Farmers weren't strongly involved in the current policy dialogue and did not concentrate
strongly on the Kyrgyz Government FSN policy efforts. However, almost all of them kept
in mind the efforts are done in 2008-2009 Food Crisis - distribution of food reserves to
vulnerable people, distribution of wheat seeds, attempts to create food reserves for the
emergency situations. Only wheat farmers participate in the wheat purchase programs,
which was active in 2009-2012. During last few years there almost wasn’t any purchasing
actions in the zone, where interviewed farmers are worked.

The main source of the public perception is the media sources - mainly TV promoting
certain policy issues. Almost all farmers aware of the Kyrgyz Government efforts
regarding Eurasian Economic Union, which is the key media issue since 2015. Farmers
weren’t aware of the definitions of food security and nutrition and how food policy
situation measured in the country.

The most relevant food security issue for the farmers, which they perceive is the
importance of domestic production of agricultural products. Farmers on their ground
base provide the majority of food for the country and for themselves. Farmers recognize
the Government effort for the rural sector, but also notice that the scope and size of the
support are limited. All farmers arise questions related to extension service
development: an increase of the farmer's knowledge base in agronomy, the post-
harvesting process of the products, quality requirements, and certification, new
technologies for plant and animal protection, state institutional support to insurance of
crops and livestock. Farmers oriented on the selection of crops and increase of the
livestock herds because of the available opportunities and high costs to change the
modality of operation to more productive agricultural practices. The limitation of the
small-scale production recognized as a crucial limitation to growth and investment in the sector. Also become critical the ability of farmers to introduce the quality assurance systems. Farmers have information about such systems as HACCP or ISO, but they even cannot recognize the level of investment needed for installing on their production sites. Limitation of the smallholder production specifics will determine the slow development of the sector in terms of restructuring to a more efficient production manner.

The main specific ability of the agricultural smallscale production is certain sustainability. In the terms of available land and labor crop oriented farmers will be able to produce the stable amount of grain, fodder crops and commercial crops in certain clustered areas - potatoes, kidney beans, fruits and vegetables, cotton. The same conclusion relevant for livestock sector - until the deterioration of commonly available pastures farmers will be able to produce meat and milk for the own consumption and for commercial purposes. However, sector wouldn’t be able to shift to a new crop or technology without special efforts of state or private business – commercially oriented merchants or processing plants. The special case in the Kyrgyz agriculture is the newly formed cluster of export-oriented kidney bean production affecting food security and nutrition situation in Talas Oblast( presented in the following section).

Processing plants representatives recognize the importance of the FSN as a part of the overall state policy regarding country development. However, the knowledge of the definition, terms, and conditionalities was far from sufficient. Private business wasn’t aware of the Government plans and legislative framework. Only the legislation they were aware was technical requirements (quality standards) applicable to them and domestic market protection measures. The decision-making process in the views of the private business moves toward the Joorku Kenesh (Parliament) rather than to the Ministry of Agriculture. From the state bodies, Ministry of Finance was named also as an important decision-making center. The monitoring tasks of the Government or measurement of the food security wasn’t in the focus of the processing industry. The main force limiting the development of the agricultural sector and food security and nutrition situation was named small-scale farmers. There are significant losses in the defining the terms of conditions of supply raw materials, problems in attempts of cooperation and significant lack in the economy of scale. Work with the hundreds of small farmers - suppliers
recognized as a permanent problem.

However private business stakeholders claim state policy for insufficient support for processing sector. Wheat flour mill representative informs on the supporting measure for a mill sector lobbied by the members of the Parliament (mill owners). Import of wheat grain was exempted from the VAT (Value added tax) from the beginning of 2016 to September 2018\(^4\). This measure creates was a protection measure to save Kyrgyz wheat flour producers from the competition of Kazakh wheat processing plants after entering Kyrgyzstan to the Eurasian Economic Union from the August 2015. However, this measure was abolished in a preschedule manner at the end of 2017\(^4\). Now all wheat processing plants are under the high pressure from Kazakh flour import. It creates certainly worries of the total bankruptcy of a whole business sector important from a perspective of food security in case of an unplanned increase of the wheat prices observed in 2008-2009.

Fruit processing business demonstrates higher stability due to the base on the local production of fruits, mainly apples. The main market is Russia and technical regulation for the dried fruits are much easier to fulfill then for other processing production. The defined problem was the gap between farmers taxation and taxation of the agricultural cooperative. Work as a group of farmers in a cooperative change the modality of the taxation strongly (See Table 7).

Table 7. Comparison of the taxation of the peasant farmers and agricultural cooperatives

<table>
<thead>
<tr>
<th>Obligatory payments</th>
<th>Peasant farmer</th>
<th>Agricultural cooperative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land tax for the production</td>
<td>Agricultural tax land or construction</td>
<td>Rates for the inhabited localities</td>
</tr>
<tr>
<td>property tax</td>
<td>rates for agricultural activity, or 0</td>
<td>Rates for the inhabited localities</td>
</tr>
<tr>
<td>Hired labor personal income tax</td>
<td>0</td>
<td>10%</td>
</tr>
<tr>
<td>Social tax</td>
<td>Equal to the land tax</td>
<td>Common social tax rate 27.25% to the salary</td>
</tr>
</tbody>
</table>

\(^{43}\) Law on the exemption from VAT of the wheat grain #12 on 26.01.2016

\(^{44}\) [Law on the exemption from VAT of the wheat grain](http://www.president.kg/ru/sobytiya/zakony/5634_vneseni_izmeneniya_v_zakon_o_vvedeni_v_deystvie_nalogovogo_kodeksa_kirgizskoy_respubliki)
### Profit tax

<table>
<thead>
<tr>
<th>Profit tax</th>
<th>Exemption</th>
<th>Exemption</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAT</td>
<td>Exemption</td>
<td>Exemption</td>
</tr>
</tbody>
</table>

**Source:** Tax Consultants Chamber

As a result, many farmers prefer to work individually due to the tax exemption or low taxation in most of the cases. According to the Head of the Tax Consultants Chamber information, in the country registered 370 agricultural cooperatives, but actively working is around 70 only. Tax Consultants Chamber prepares for the Ministry of Economy new amendments to the Tax Code for agricultural cooperatives:

- Excluded tax threshold of 200 thousand som of annual turnover (3000 US dollars) for exemption from the VAT on the import of equipment,
- Decline taxation on the hired labor (2.5 times),
- The decline of the taxation of the property tax and land tax for the production constructions (10 times).

It will create the better support for the consolidation of farmers in agricultural cooperatives and will definitely support more sustainable food security situation prospects. The amendments bill in the Parliament in the third reading and expected to be approved during a month.

### 4.2. Kidney Bean Cluster Case Study

Kidney bean is a newly developed crop in the country. Other legumes, e.g. peas and soybean historically cultivated in southern Kyrgyzstan in low volumes. Consumption of the beans in the country is relatively low and varies from 0.18-0.36 kg/person/year (2011-2014). Consumption of peas also low - 0.72 kg/person/year (2014).

From the mid-90s, bean production starts to develop for commercial purposes in Talas Oblast of Kyrgyzstan due to the efforts of representatives of the Turkish merchants. The initial zone where kidney beans start to be cultivated was the Central part of Talas Valley.

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46 Legumes consumption was excerpted from Kyrgyz Integrated Household Survey (NSC)
Kurds constitute an ethnic minority (2.5% of the population in this region) living in the Kara-Buura and Manas districts. Kidney beans were cultivated originally by Kurds in small quantities for own consumption and minor export of their diaspora in Uzbekistan. Gradually due to the sustainable demand for beans and an increase in purchasing prices after the emergence of competitive Turkish traders firms, Kyrgyz farmers gradually started cultivating beans in increasing quantities. Sustainable demand for beans from Turkish exporting firms played a key role in bean spread as the main crop of the region.

There are exists the evidence of specific climatic and natural conditions bringing to a relative efficiency of growing kidney beans compare to other crops - altitude above the sea level. The main part of the bean cultivated area in Bakai-Ata and Kara-Buura areas is in the middle altitude zone of the valley at the level of 1,000-1,400 m above sea level. In combination with other production efficiency factors, it brings to a relatively higher production efficiency impacted on the lower poverty level on the household-based family farming in the region (2011). Thus, the main reasons for the sharp growth in bean cultivation in the region are relatively higher production efficiency on the smallholder farmer level combined with the stable export-oriented demand and relatively high prices.

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47 Kurds were interned in Kyrgyzstan and other republics of Central Asia from the Caucasian republics of the USSR in the 1930s of the 20th century.
on beans in the observed period.

Figure 25. The growth of legumes cultivated area in Kyrgyzstan and Talas Oblast in 1999-2017, thousand ha

![Graph showing the growth of legumes cultivated area in Kyrgyzstan and Talas Oblast from 1999 to 2017.](image)

Source: National Statistical Committee

Figure 26. Production of legumes cultivated area in Kyrgyzstan and Talas Oblast in 1999-2017, thousand ha

![Bar chart showing the production of legumes cultivated area in Talas region and other regions from 1999 to 2017.](image)

Source: NSC

The gross yield of legumes increased almost 7-fold over 18 years (1999-2017) (See Figure 26). However, the yield productivity has slightly decreased over time - on average 1.7 tons/ha. The average yield was 1.9-2 tons per 1 ha at the beginning of the century (1999-2000).

In the past decade, the Talas region produced 90-94% of all leguminous crops in the country. In Talas Oblast, all arable land is approximately 100 thousand hectares. In 2017, the total agricultural land share dedicated to beans reach 52.3% of the total arable land in the region, and 4.9% of all cultivated area in Kyrgyzstan. In the central part of the region (Kara-Buura and Bakai-Ata district) the share of kidney beans reach the level of
66-67%. In addition to beans, the Talas Oblast also produces such crops as potatoes, grain (wheat, grain maize, and barley), vegetables, perennial grasses, oil-bearing crops, fruits, and berries.

In 2009-2016, Kyrgyzstan exported 60-70 thousand tons of kidney beans on average. The value of exported beans varies from year to year strongly due to bean price fluctuations on international markets. It brings on average 45-50 million USD annually in the observed period. The share of beans exports in the total export of the Talas region is 92-96 %, and as a result, beans are the region’s main export commodity and us the number one agricultural product in the country. Maximum of the monetary value of the bean export was reached in 2013 with 73 million USD (See Table 8).

### Table 8. Export of goods and kidney beans share in exports in 2009-2016

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</tr>
</thead>
<tbody>
<tr>
<td>Export of goods, million USD</td>
<td>1,178.3</td>
<td>1,488.4</td>
<td>1,978.9</td>
<td>1,683.2</td>
<td>1,773.2</td>
<td>1,640.6</td>
<td>1,441.5</td>
<td>1,544.6</td>
</tr>
<tr>
<td>Export of beans, million USD</td>
<td>29.6</td>
<td>35.1</td>
<td>51.8</td>
<td>48.2</td>
<td>73</td>
<td>62</td>
<td>43.7</td>
<td>55</td>
</tr>
<tr>
<td>Export of beans, thousand tons</td>
<td>53.3</td>
<td>57</td>
<td>76.4</td>
<td>51.4</td>
<td>51.7</td>
<td>53.1</td>
<td>66.7</td>
<td>83.7</td>
</tr>
<tr>
<td>Share of beans in the export, %</td>
<td>2.5%</td>
<td>2.4%</td>
<td>2.6%</td>
<td>2.9%</td>
<td>4.1%</td>
<td>3.8%</td>
<td>3.0%</td>
<td>3.6%</td>
</tr>
</tbody>
</table>

Source: UN COMTRADE, * State Customs Service under the Government of the Kyrgyz Republic

**Figure 27. Export of beans from Kyrgyzstan to major markets in 2009-2016, thousand tons**

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Most of the harvested beans are exported to Turkey and Balkan countries in Europe (Bulgaria, Macedonia, and Serbia). In 2016 share of that four countries reach 73% (see Figure 5). New growing countries are Russia and Kazakhstan. The share of that two countries reaches 18% in 2016. Supply to other countries varies. Purchased prices for Kyrgyz beans depend on the situation in the global market. The yield in China, Argentina, and Egypt and other major bean exporters, as well as demand in Turkey and the Balkans, and currency fluctuations affect purchase price and therefore the bean market development in Kyrgyzstan.

Legume production growth was extensive due to a significant increase in the kidney bean cultivated areas in Talas Oblast. Beans have become a monoculture and play a significant role in the region. At the country level, it is a notable crop and is the tenth most important crop in Kyrgyzstan. An indirect impact of the development of the bean sector has been the improvement to a number of socio-economic indicators for regional development (see Table 9). In the past three years, poverty levels in the region have significantly decreased – currently, the Talas region is the least poor region in the country with a poverty rate one third lower than the national average. Unemployment has also significantly decreased in this region and employment has increased. The employment rate in Talas is 16% higher than the rest of the country, while the unemployment rate is more than two times lower than the national average.

Table 9. Socio-economic development indicators comparison of the Kyrgyzstan and Talas Oblast in 2008-2016, %
<table>
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</thead>
<tbody>
<tr>
<td>Poverty rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>National</td>
<td>31.7</td>
<td>31.7</td>
<td>33.7</td>
<td>36.8</td>
<td>38.0</td>
<td>37.0</td>
<td>30.6</td>
<td>32.1</td>
<td>25.4</td>
</tr>
<tr>
<td>Talas Oblast</td>
<td>43.0</td>
<td>33.0</td>
<td>42.3</td>
<td>50.2</td>
<td>39.6</td>
<td>23.1</td>
<td>19.0</td>
<td>21.5</td>
<td>18.1</td>
</tr>
<tr>
<td>Employment rate</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>National</td>
<td>60</td>
<td>59</td>
<td>58.6</td>
<td>59.3</td>
<td>58.8</td>
<td>57.3</td>
<td>57.3</td>
<td>57.7</td>
<td>57.1</td>
</tr>
<tr>
<td>Talas Oblast</td>
<td>66.9</td>
<td>67.5</td>
<td>68</td>
<td>67.5</td>
<td>66.6</td>
<td>67.8</td>
<td>73.2</td>
<td>74.1</td>
<td>72.2</td>
</tr>
<tr>
<td>Unemployment rate</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>National</td>
<td>8.2</td>
<td>8.4</td>
<td>8.6</td>
<td>8.5</td>
<td>8.4</td>
<td>8.3</td>
<td>8</td>
<td>7.6</td>
<td>7.2</td>
</tr>
<tr>
<td>Talas Oblast</td>
<td>5.4</td>
<td>4.9</td>
<td>5.1</td>
<td>5</td>
<td>4.1</td>
<td>3.7</td>
<td>3.9</td>
<td>3.3</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Source: NSC

In addition to the positive trends, some negative social factors should also be noted. In the Talas region, there was a sharp increase in the use of child labor— from 10.3% in 2007 to 29.6% in 2014. The number of children, who do not attend school, is increasing in the region. Children who do not attend school in the Talas region work. There is no evidence of a direct linkage defined between kidney beans and child labor, but given the profitability of cultivation and post-harvest processing of beans and the high levels of manual labor required, this trend can be realistic. This negative impact can have far-reaching consequences for the future education and health status of the population of the region.

5. Towards an Improved FNS Policy Framework

Currently updated FSN Program now is under the preparation stage by the Ministry of Agriculture and planned to be presented for approval during Fall 2018. There are few lessons learned from the previous country experience might be useful to account for this process.

As a first suggestion might be recommended setting a realistic timeframe for the development of the program. Introducing of many actions to a limited timeframe without sufficient preparatory work makes program implementation vulnerable to any unplanned change, the absence of the resources in time and technical expertise.

The second suggestion is to increase domestic funding from the state budget. Make Program with the disproportionate small own financing makes all activities extremely dependent on the external donor support. It is also important to fund domestically the basic functions of the state – besides monitoring functions state may fund critically important issues affecting health – e.g. fortified wheat flour and “Gul Azyk” for newborn
kids, and school food for the elementary schools.

The third suggestion is an exclusion of non-governmental actors - policy experts and private business. Intensive policy dialogue process will help to inform all stakeholders on the main elements of the FSN system, definitions, norms, and importance of introduction to practice food quality standards. Active non-governmental participants of the process – smallholder farmers and processing industry businesses, importers of food, retail networks, civil society leaders (local authorities) - will help to make the new Program more viable and better understandable by the main forces of the process - food producers and consumers. The process will highly productively facilitate the process of a better knowledge base improvement for the main non-governmental stakeholders. It will also inform consumers on the issues of food security and nutrition which is extremely important taking into account growing importance of a healthy food consumption.

A fourth important feature of the new FSN Policy is the necessity to the harmonization of the new FSN program to the country strategies - to the long-term and to the mid-term. Integration of FSN Program will help to implement it in practical terms by the Government bodies. If the program wouldn’t be obligatory for the fulfillment the realization will be always under the ignorance of state bodies.

The fifth problem is the low knowledge base at all levels of the process – the capacity building is required for the public officials, technical specialists, researchers, teachers, farmers and private enterprises, schools and nutrition specialists and even to the mass media representatives. The training for the different levels of stakeholders will make the process of introduction of the new standards, technologies, and implementation of actions more effective and efficient. A separate attention needs to be addressed for the health diet by a population - safe and diversified diet importance, food for newborn kids, school food program support etc.
6. Conclusions

Kyrgyzstan passes numerous problems during last 25-30 years after the fall of Soviet Union. Some challenges passed more successfully than others and progress are hard to be named a sustainable. There are exists a number of future issues country need to overpass in attempts to assure sufficiently stable food security and nutrition situation.

There are several thoughts need to formulate to rethink the FSN situation. Need to state that vulnerability of Kyrgyzstan’s FSN situation depends strongly on global macroeconomic factors - world food prices, dynamics of oil and gas prices, development of trade with the main trade partners. The ability of Kyrgyz economy to adapt to the worsening situation is high enough but anyway limited and cannot compensate the decline of access to food.

There are also other factors which developed in a worrying trend - nutrition situation. Even with available access to beans, Kyrgyz people prefer to keep traditional consumption pattern. The efforts of researchers in that regard need to be intensified - besides of nutrition specialists, probably also by anthropologists too.

The behavior of Kyrgyz State in the situation of worsening of FSN situation is highly adaptive and rational. Kyrgyz Government always keen to formally recognize and attract donor attention and financing to the FSN issues - school food program, construction of laboratories, the introduction of technical standards supported by external donors. However, need to state that two factors seriously limits the efficiency of the Government efforts - low domestic funding and understanding of the limits of state regulating. Finance issue discussed several times already, so the example of efforts of state bodies to support an increase of wheat volumes might be reminded. There are been several programs of motivating farmers to crop wheat, but the dynamics of wheat fields shows an opposite dynamics.

Farmers, food producers, and consumers operating within their own reality and demonstrate a certain level of sustainability and improvement, but also certain inertia in production and consumption of food habits and modality of work. The role of Government and international development organizations also need to be revised towards and the inclusion of non-governmental actors to the policy development area.
and an increase of the informativeness level and knowledge base among active participants of the process and population of the country.
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http://comtrade.un.org

FAO Database

World Bank Database
https://data.worldbank.org/topic/poverty
databank.worldbank.org/data/...source=world-development-indicators

World Health Organization Database
http://www.who.int/nutgrowthdb/database/en/
http://www.who.int/gho/ncd/risk_factors/overweight/en/

National Statistical Committee of Kyrgyz Republic
http://stat.kg
The Government of the Kyrgyz Republic website:
http://www.gov.kg/?p=117456&lang=ru
http://www.gov.kg/?p=117304&lang=ru

Ministry of Economy of Kyrgyz Republic website:

Ministry of Justice of Kyrgyz Republic website:
http://cbd.minjust.gov.kg

Ministry of Healthcare of Kyrgyz Republic website:
http://med.kg/ru/dok/obsuzhdenie-npa.html

President of the Kyrgyz Republic website:
http://www.president.kg/ru/sobytiya/novosti/6015_proekt_nacionalnoy_strategii_razvitiya_kirgizskoy_republiki_na_2018_2040_godi
http://www.president.kg/ru/sobytiya/zakony/5634_vneseni_izmeneniya_v_zakon_o_vvedenii_v_deystvie_nalogovogo_kodeksa_kirgizskoy_republiki

Websites of the donor support and news agencies:
8. **Attachment 1. Normative and legal acts regulating food security and nutrition in Kyrgyzstan**

<table>
<thead>
<tr>
<th>Area</th>
<th>Type of documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Main legislation</td>
<td>• Law &quot;On Food Security of the Kyrgyz Republic&quot; of August 4, 2008 No. 183&lt;br&gt;• Program of Food Security and Nutrition of the Kyrgyz Republic for 2015-2017</td>
</tr>
<tr>
<td>3. Legislation regulating food safety issues</td>
<td>• Law of the Kyrgyz Republic “On fortification of baking flour” of March 11, 2009 No. 78&lt;br&gt;• Law of the Kyrgyz Republic “Technical regulations “About the safety of drinking water” of May 30, 2011 No. 34</td>
</tr>
<tr>
<td>4. Legislation regulating health issues</td>
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<tr>
<td>♦ Law of the Kyrgyz Republic “About prevention of iodine deficiency diseases” of February 18, 2000 No. 40</td>
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</tr>
<tr>
<td>♦ Order of the Ministry of the Health of Kyrgyz Republic “About prevention of micronutrient deficiency among children aged from 6 up to 24 months and women in the Kyrgyz Republic” of April 25, 2011 No. 182</td>
<td></td>
</tr>
<tr>
<td>♦ The program for the decrease in the level of iodine deficiency diseases in the Kyrgyz Republic for 2010-2014 approved by the Decree of the Government of the Kyrgyz Republic of January 19, 2010, No. 22</td>
<td></td>
</tr>
<tr>
<td>♦ Decree of the Government of the Kyrgyz Republic “About the implementation of the Law of the Kyrgyz Republic “About prevention of iodine deficiency diseases&quot; of January 9, 2001 No. 6</td>
<td></td>
</tr>
</tbody>
</table>
| **5. Legislation regulating the competence of state bodies and local authorities** | - Decree of the Government of the Kyrgyz Republic "About the Adoption of the Agreement on Prevention of Iodine Deficiency States among the Population of the State Parties of the Commonwealth of the Independent States" of September 19, 2001 No. 572  
- Order of the Ministry of the Health of Kyrgyz Republic of April 2, 2010 No. 175 "About the implementation of the Decree of the Government of the Kyrgyz Republic of January 19, 2010, No. 22 "About the approval of the Program for the decrease in the level of iodine deficiency diseases in the Kyrgyz Republic for 2010-2014"  
- The provision on the Ministry of Health of the Kyrgyz Republic approved by the Decree of the Government of the Kyrgyz Republic of February 20, 2012 No. 118  
- The provision on the Ministry of Agriculture and Melioration of the Kyrgyz Republic approved by the Decree of the Government of the Kyrgyz Republic of February 20, 2012 No. 140  
- The provision on the State inspection of veterinary and phytosanitary safety under the Government of the Kyrgyz Republic approved by the Decree of the Government of the Kyrgyz Republic of May 7, 2013 No. 256  
- The provision on the Department of prevention of diseases and state sanitary and epidemiological surveillance of the Ministry of Health of the Kyrgyz Republic approved by the Decree of the Government of the Kyrgyz Republic of June 10, 2013 No. 319  
- The provision on the Development department of drinking water supply and water disposal at the State agency of architecture, construction and housing and communal services under the Government of the Kyrgyz Republic approved by the Decree of the Government of the Kyrgyz Republic of August 30, 2012 No. 600 |

- |
### 9. Attachment 2. List of the covered key informants

<table>
<thead>
<tr>
<th>#</th>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Choduev Erkinbek Uraiyymovich</td>
<td>Ministry of the Agriculture, Food Industry and Melioration, Deputy Minister of Agriculture</td>
</tr>
<tr>
<td>2</td>
<td>Kydykmanov Emilbek Sagyndykovich</td>
<td>Ministry of the Agriculture, Food Industry and Melioration, Head of the Department of the agrarian policy and economic forecasts</td>
</tr>
<tr>
<td>3</td>
<td>Taranova Elena Pavlovna</td>
<td>Ministry of the Agriculture, Food Industry and Melioration, Chief Specialist of the Department of the agrarian policy and economic forecasts</td>
</tr>
<tr>
<td>4</td>
<td>Mursabekova Gulzeinep Turdubekovna</td>
<td>National Statistical Committee, Head of the Department of the Real Sector</td>
</tr>
<tr>
<td>5</td>
<td>Mogilevskii Roman Isaakovich</td>
<td>Deputy Director, Institute of Public Policy and Administration, University of Central Asia</td>
</tr>
<tr>
<td>6</td>
<td>Ten Lubov Ivanovna</td>
<td>Food Policy Expert</td>
</tr>
<tr>
<td>7</td>
<td>Mamyrbayeva Tursun Turganbaevna</td>
<td>Specialist on nutrition, NGO “Scaling Up Nutrition”</td>
</tr>
<tr>
<td>8</td>
<td>Marlen Tynaliev</td>
<td>Food Security Expert, FAO- Kyrgyzstan</td>
</tr>
<tr>
<td>9</td>
<td>Omoshev Mirbek</td>
<td>Farmer (kidney bean), Kyzyl-Adyr Village, Talas Oblast - the interview was in Bishkek</td>
</tr>
<tr>
<td>10</td>
<td>Satarkulov Ozgorush</td>
<td>Farmer (wheat), Panfilov Village, Chui Oblast</td>
</tr>
<tr>
<td>11</td>
<td>Isakov Tologon</td>
<td>Farmer (Sheep), Orto-Aryk Village, Chui Oblast</td>
</tr>
<tr>
<td>12</td>
<td>Sadyr Arslanov</td>
<td>Chief Engineer, Dan Azyk (Flour production), Poltavka Village, Chui Oblast</td>
</tr>
<tr>
<td>13</td>
<td>Primova Klara</td>
<td>Director “Agroelita” Cooperative (dried fruits) - the interview was in Bishkek</td>
</tr>
<tr>
<td>14</td>
<td>Kim Tatiana Mikhailovna</td>
<td>The Head of the Tax Consultants Chamber</td>
</tr>
</tbody>
</table>