

# Food and Nutrition Security in Iran

A SUMMARY REPORT

WFP IRAN COUNTRY OFFICE



**World Food Programme**



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## EXECUTIVE SUMMARY

Iran is an upper middle-income country, with the population of 75 million. The population resides predominantly in urban area where seventy-one percent of the total population is found. The country is bordered by seven countries, namely Afghanistan, Armenia, Azerbaijan, Iraq, Pakistan, Turkey and Turkmenistan. The country has the next largest economy in the Middle East, after Saudi Arabia with large reserves of natural gas and crude oil.

Iran has gone through economic downturn over the past years due to prolonged international sanctions. Soaring food prices and subsidy cut have directly affected the food security situation among the poor and vulnerable population. The international sanctions have been lifted since 2016, though the positive impacts on the Iranian economy are yet to be materialized.

The country is prone to various food security shock factors. Among others, volatile agricultural production, food price hike, natural disasters like earthquakes, floods and droughts, and political instability of the neighbouring countries would have a negative impact on food security of the population.

This report aims to describe the current food and nutrition security situation and vulnerability factors in Iran, identifying geographical areas of concern and the population groups that would be most adversely affected by food insecurity shocks or relevant risk factors. The report is prepared based on secondary data analysis. It should be noted that access to relevant data and information is limited, and the available data from various sources was not always consistent or complete, which reduces the validity of the report.

Agriculture accounts for some eight percent of GDP, absorbing 19 percent of the labour force. The country is an important agricultural producer, ranking among the top 20 producers in the world for several agricultural commodities. The agricultural production reached its peak in 2007, but suffered from a severe drought in 2008 and the level of production has not recovered fully. Consequently, the country increasingly relies on food import with the self-sufficiency rates hovering around fifty percent lately. The country has a greater potential to increase the agricultural production. Among others, efficient use of water resources, reduction of food loss, and

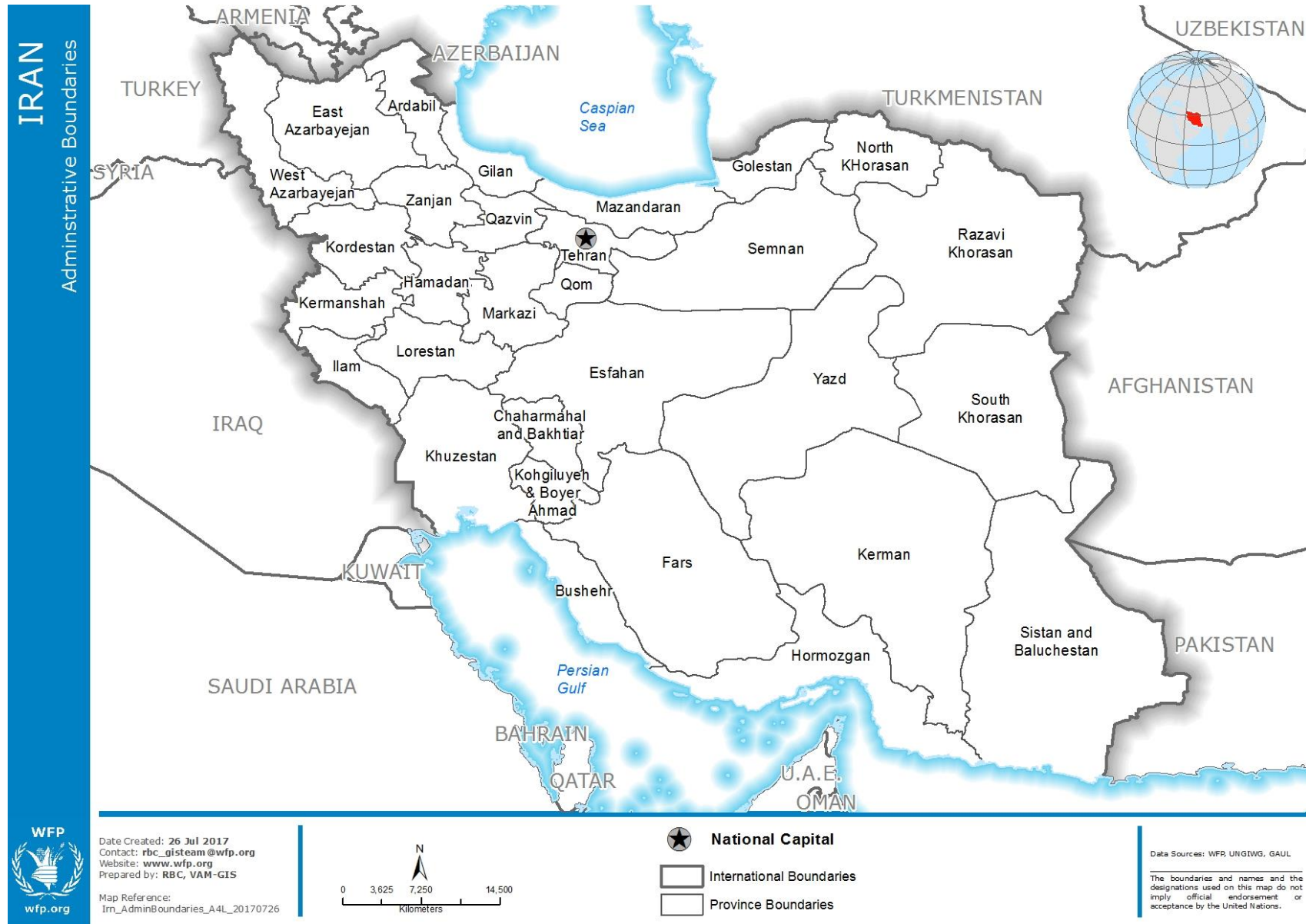
further improvement on transportation infrastructure are key issues to be addressed to achieve this.

Based on the available data, household food security situation has been stable though the vulnerability to food insecurity has increased over the past years. Food price hike, subsidy cut and high levels of un/under employment due to economic downturn have limited the population's economic access to nutritious food. Iran is relatively an equal country with a low Gini coefficient, but a number of population is considered to be just above the poverty line, which is to say that a further deterioration would push the vulnerable population into poverty. Micronutrient deficiency, particularly vitamin-D deficiency is prominent among pregnant women and young children.

National social protection/safety-nets systems cover the Iranian citizens, though their coverage has become increasingly limited due to the budget constraints of the government. Subsidy cut that was initiated in 2010 has contributed to escalating the inflation, whereas the income level has not kept up with the price hike, and consequently lowering the population's purchasing power. It is worth noting that refugee population is among the hardest hit by the cut – they used to have access to staple goods at subsidized prices, which is no longer available, and they are not eligible to benefit from national safety-nets such as targeted cash transfers that have been introduced to compensate the subsidy cut.

The food security and nutrition situation varies by geography and demography. Remote rural provinces with low agricultural production and limited income generating opportunities are more vulnerable to food insecurity. Sistan va Bulchestan province, for instance, scores the worst for all the dimensions of food security – availability, access, utilization and stability. Densely populated urban areas with a high risk of earthquake, including Tehran, deserve a special attention, given that the consequence of any large-scale earthquakes would result in a catastrophic situation that may require international assistance. The poor and vulnerable, refugees are the most vulnerable to economic shocks. Pregnant women and young children are prone to malnutrition, whereas the youth is exposed to a high level of unemployment.

Map 1. Iran Administrative Map



## INTRODUCTION

### BACKGROUND

Iran is an upper middle-income country, with the population of 75 million. The population resides predominantly in urban area where seventy-one percent of the total population is found. The country is located in the central location in Eurasia, Western Asia and the Strait of Hormuz, bordering Turkmenistan on the north, with Kazakhstan and Russia across the Caspian Sea, on the east by Afghanistan and Pakistan; on the south by the Persian Gulf and the Gulf of Oman; on the west by Iraq; and on the northwest by Armenia, Azerbaijan and Turkey. Iran is divided into 31 provinces, and each province is subdivided into counties (*shahrestan*). There is a total of 402 counties in the country.

Iran has the next largest economy in the Middle East, after Saudi Arabia. The country has large reserves of natural gas and crude oil and natural gas reserves, which is one of the main source of government revenue. However, due to the international sanctions the hydrocarbon sector is not operating at full capacity.

The last few years the Iranian economy has suffered from low growth combined with high inflation due to several economic shocks. In 2010 the targeted subsidy reform was rolled out, replacing subsidies on key staples as petroleum, energy, water and bread with a monthly cash transfers to targeted households. This led to high inflation, which was further elevated by the extension of the international sanction in 2012. On 20 July 2015, the UN voted unanimously to start lifting the sanctions given the successful implementation of the Joint Comprehensive Plan of Action between Iran and the group of G5+1 on Iran's nuclear programme.

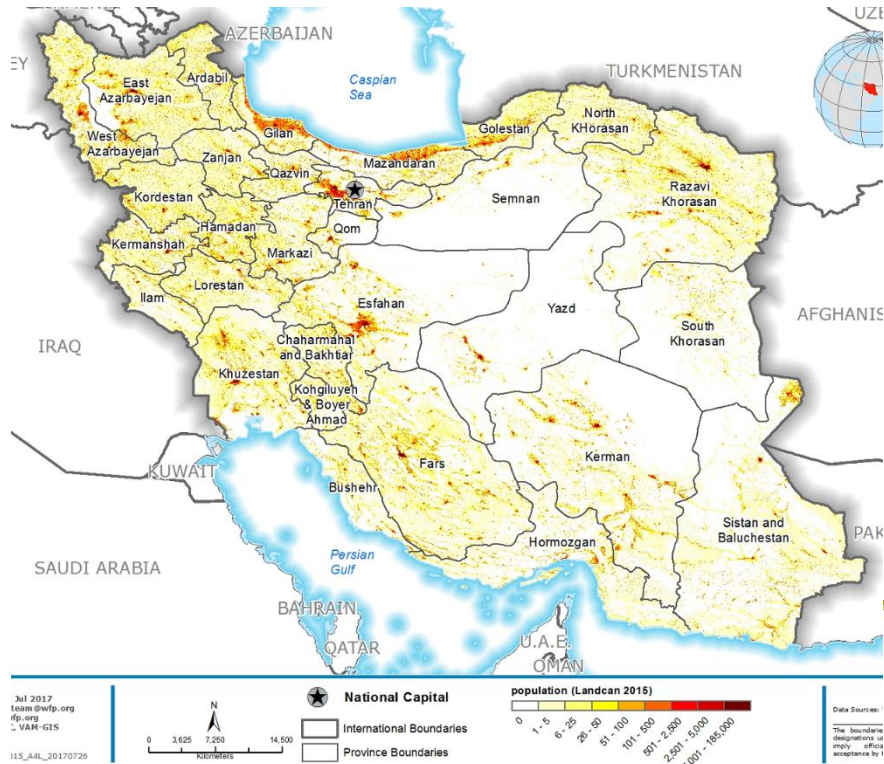
Since the 1980s, Iran has received a number of refugees from Afghanistan and Iraq, hosting one of the largest refugee populations in the world. Since 2002 Iran has cooperated with UNHCR, WFP and the government of Afghanistan to implement a voluntary repatriation plan. After a successful start, the number of voluntary repatriation has fallen to almost nil by 2014. The number of registered refugees is close to one million in 2014, but some estimate the total number of Afghans to be over two million. At the same

time, the escalation of conflicts in the region, both in Afghanistan and the region at large, could cause new waves of refugees. Although Iran has long experience of hosting refugees, its capacities are already stretch to the limit.

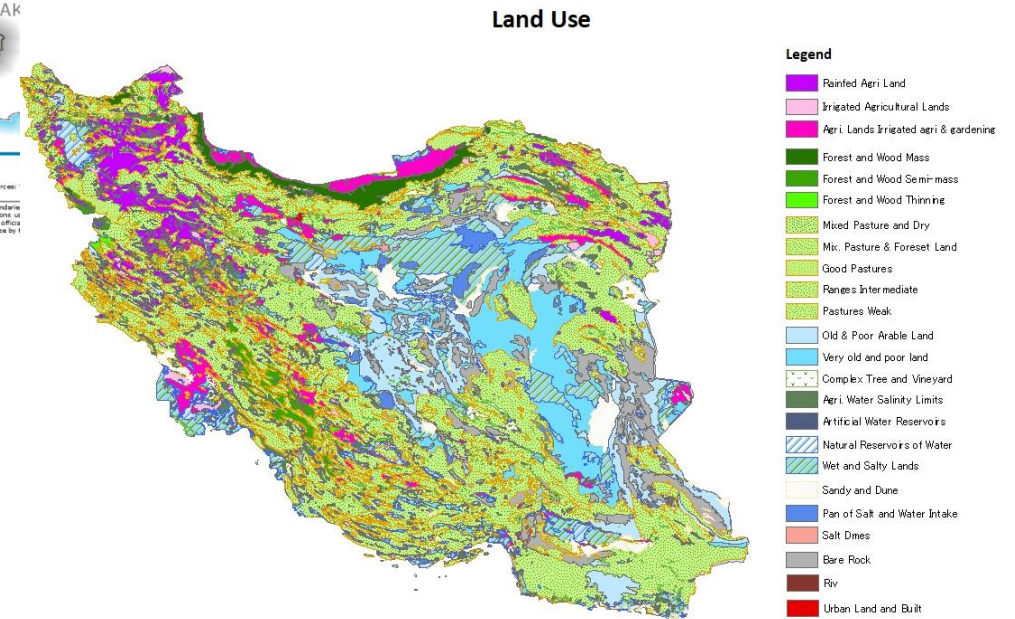
Iran has suffered more than 130 earthquakes with a magnitude of 7.5 on Richter scale or above the last seven decades. In the 20<sup>th</sup> century alone, more than 150,000 human lives have been lost. Several cities, including Teheran, are located in high seismic activity zones. Tehran has been struck by devastating earthquakes several times in the past, with the last earthquake above 7 on Richter scale was in 1830. In response, Iran has developed notable capacity in disaster preparedness, and Disaster Risk Reduction is a high priority at the national level. Nevertheless, a strong earthquake in densely populated urban areas would have disastrous impact, which may go beyond the national response capacity.

WFP Iran has been operational since 1987, providing targeted food assistance to some 30,000 Afghan and Iraqi refugees living in 19 settlements across the country. As part of the Emergency Preparedness activities, WFP has developed the Concept of Operations (CONOPS) for Iran, under two risk scenarios: i) influx of refugees from Afghanistan; and ii) earthquake in urban area. Given the high risk of the two scenarios, a food and nutrition security baseline analysis is to be carried out to better understand the food and nutrition security situation and vulnerability factors in Iran.

Map 2. Population Map (Landscan 2015)



Map 3. Land use map





## METHODOLOGY

The purpose of this report is to provide the information about food security and nutrition situation and vulnerability factors in Iran, identifying geographical areas of concern and the population groups that would be most adversely affected by food insecurity shocks or relevant risk factors.

Secondary data analysis has been performed by a team of consultants led by Hamid Farahanirad who compiled a detail report. The summary report has been pulled together by WFP (RBC VAM) with an overall supervision by Negar Gerami, the WFP Iran Country Director.

The report is based on a range of data and reports, focusing primarily on the period since 2000. Notable sources are the followings: official reports from the Statistical Centre of Iran (SCI), the Central Bank of Iran, and the Ministry of Agriculture and Jihad; Iranian Chamber of Commerce and International Industry Associations and Specialized Research Organizations; global datasets available from international organizations such as World Bank and FAO.

It is worth noting that access to micro data was not possible, which limits the exploratory analysis using household survey data. In addition, authors found that the data published by various entities, in some cases, is neither consistent nor complete.

This report follows the Food and Nutrition Security Conceptual Framework, within the context of the Iran. Chapter-2 outlines the macroeconomic situation of Iran, explaining the importance of the Targeted Subsidy Reform and the International Sanctions. Chapter-3 and 4 analyse the issues around food supply - agricultural production, trade, food loss and food balance. Chapter-5 discusses the food market situation. Household food and nutrition security situation is described in Chapter-6, followed by access to services (Chapter-7), and food insecurity shock factors affecting stability (Chapter-8). In the conclusion, findings from the previous chapters are pulled together to identify the vulnerability factors in Iran, highlighting the geographical areas and populations most at risk.

### BOX: FOOD AND NUTRITION SECURITY CONCEPTUAL FRAMEWORK

*Food security – The state at which all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life (World Food Summit, 1996).*

Food and nutrition security cannot be measured by a single indicator. There are different dimensions affecting food security, and all must be taken into account to draw an accurate picture of the food and nutrition security of a country. Food security is defined as follows: *“the state at which all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life” (World Food Summit, 1996).* The definition of food security considered originally three distinct, but strongly interrelated pillars 1) food availability, 2) food access and 3) food utilization. Following the World Food Summit of 2009, the concept was extended to include the fourth pillar, stability, and it stressed the importance of the nutritional dimension.

This report is prepared following the WFP’s corporate Food and Nutrition Security Conceptual Framework with an attempt to provide a holistic view on food security of Iran, looking at the four dimensions - availability, access, utilization and stability at all levels (i.e. national, subnational and household levels).

## THE MACROECONOMIC SITUATION

Iran has the second largest economy in the Middle East after Saudi Arabia, and it has the second and the fourth largest proven natural gas and crude oil reserves in the world. The total Gross Domestic Production in 2014 was \$406 billion<sup>1</sup>. After decades of economic growth and increasing living standards, the economic progress has been stagnating in the last few years, due to both domestic and international factors. According to the IMF, the macroeconomic performance of Iran deteriorated markedly following the subsidy reform in 2010 and the intensification of sanctions in 2012.<sup>2</sup> Real GDP fell by 5.8 percent the year 2012/2013<sup>3</sup> and inflation increased with 41.2 percent<sup>4</sup>. The economy improved some in the following year, but inflation remains two-digit. The year-to-year inflation in June 2015 was 15 percent according to the Statistical Centre of Iran (SCI).

The Iranian Rial (IRR) has depreciated considerably over the last few years, and in 2012 it lost almost 80 per cent of its value against the dollar<sup>5</sup>. In 2011, one US dollar cost about 10,000 IRR while the exchange rate for 2014 was almost 26,000 IRR.

The unemployment rate in Iran remains high, at 10.6% in 2014, with unemployment among the youth above 25%. The high unemployment rate among the youth is particularly worrisome as a high share of the Iranian population is below 30 years old and many youths will enter the labour market in the next years.<sup>6</sup>

The recent development opening for fully lifting the international sanctions by spring 2016 provide an important boost to the Iranian economy, and a positive economic outlook for 2016. On the other hand, if oil prices remain low this would have a negative impact on the government's budget. An estimate by the IMF found that Iran is one of several oil producing countries

<sup>1</sup> World Bank: <http://www.worldbank.org/en/country/iran/overview>

<sup>2</sup> IMF Country Report No. 14/93, April 2014.

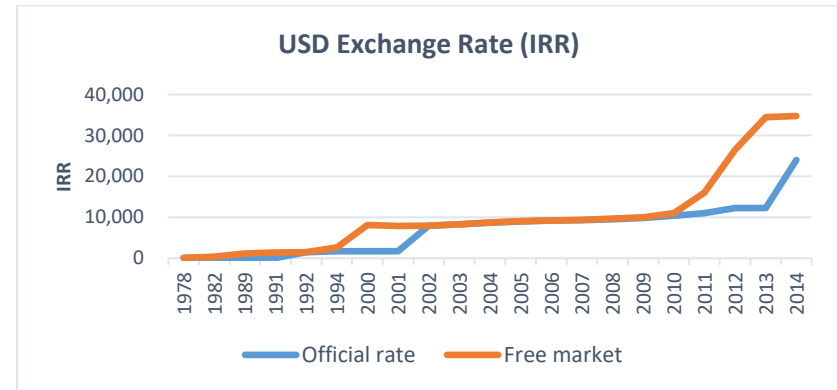
<sup>3</sup> <https://www.imf.org/external/pubs/ft/scr/2014/cr1493.pdf>

<sup>4</sup> Iran fiscal year end on 20<sup>th</sup> March of the Gregorian calendar. The year 1392 refers to the Gregorian year starting on 21 March 2013 and ending on 20 March 2014.

<sup>5</sup> SCI. inflation measured as CPI average.

that could be running out of money if the oil prices remains at the current level<sup>7</sup>.

Figure 1. USD Exchange Rate (Iranian Rial)



Source: Statistical Centre of Iran

## TARGETED SUBSIDY REFORM (TSR)

In December 2010, the Iranian government implemented the first phase of the Targeted Subsidy Reform (TSR). The reform aim to replace the indirect subsidies of key staples with direct cash transfer to targeted households. The subsidy programme is very expensive and the reform remains a priority of the Iranian government. In 2008 the estimated cost of the indirect subsidies was equivalent to 27% of GDP (approximately USD 77 Billion)<sup>8</sup>. However, the quick implementation of the first phase of the reform,

<sup>5</sup> ICG

<sup>6</sup> SCI. IMF other figures? WB has different number but 1-12 year? 11.4 in 2014 and 10.4 in 2013.

<sup>7</sup> IMF article – add link.

<sup>8</sup> World Bank: <http://www.worldbank.org/en/country/iran/overview>

intertwined with sanctions, had unintentional consequences, among others leading to high inflation.

The first phase of the reform reduced the subsidies of key staples such as petroleum, water, electricity and bread. The price increase of these commodities, led to an increase in general production cost, causing two-digit inflation rates. At the same time, the high inflation and uncertainty about future prices led to stockpiling of commodities, pushing prices up further.

The cut in energy subsidies hit the industrial sector particularly hard. To compensate the industry for the loss of cheap energy, 30 per cent of the reform budget was initially earmarked for them. However, the industry did not receive the promised support, causing a decrease in the domestic production at the same time as the intensification of the sanctions. To ensure sufficient supplies, the government allowed import that made it impossible for Iranian manufacturing companies to compete, leading to layoffs and higher unemployment<sup>9</sup>.

Initially around 64 million Iranians received the cash transfer of approximately \$45 per month, but a more target approach was introduced in 2013, limiting the cash transfer to low-income households. Although the direct cash transfer has been important to poor and large households, particularly in rural areas, it has not been adjusted at the same rate with the inflation.

The TRS also aimed to reduce the consumption of energy. Initially the energy consumption fell significantly, but as the inflation caused a decline in real energy prices the consumption of energy went up again. Energy prices are still heavily subsidised. In 2014, Iran started the implementation of the

second phase of the reform, increasing the price of petroleum with 75%, but the price of petroleum is still far from the target.

## INTERNATIONAL SANCTION

In July 2015, the G5+1 (i.e., China, France, Germany, Russia, United Kingdom and United States) and Iran agreed on the Joint Comprehensive Plan of Action (JCPOA). The JCPOA will lead to the lifting of the international sanctions by spring 2016 if implemented successfully.<sup>10</sup> This would have a significant impact on the Iranian economy. However, the complexity of the situation and the myriad of sanctions means its successful implementation is not guaranteed.

The international sanction of Iran consists of numerous different legal frameworks which have developed and evolved since the early 1980s. The sanctions have been introduced in several waves, and implemented by different governmental and institutional bodies. The final wave of sanctions started in 2010, with implementation of some of the harshest and far-reaching sanction in 2012. In a February 2013 report from the International Crisis Group, the situation was described as following: *“The patchwork of sanctions now imposed on Iran is impressive. It has effectively impaired its main source of income, the export of oil and petroleum products; cut off its banking infrastructure from the global financial system; forced it to engage in inefficient barter deals; and stymied imports of dual-use goods, but also indirectly in some cases basic food staples and medicines”*<sup>11</sup>

One of the priority targets of the sanction has been the gas and oils export, which is the main source of government’s revenue. Iran has the 2<sup>nd</sup> largest natural gas reserve in the world, and 4<sup>th</sup> largest crude oil reserve. However, the sanction has reduced Iran’s export as well as production capabilities significantly. The average oil export fell from 2.5 million b/d in 2011 to under 1 million b/d in January 2013. Furthermore, even with the lifting of sanction

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<sup>9</sup> Crisis Group International. Middle East Report 138, 25 February 2013 “Spider Web: The Making and Unmaking of Iran Sanction”

<sup>10</sup> UNSCR 2231, passed on 20 July 2015, sets out a schedule for suspending and eventually lifting UN sanctions, with provisions to reimpose UN sanctions in case of non-performance by Iran, in accordance with the JCPA.

<sup>11</sup> International Crisis Group, p 18.

it would take Iran several years to return to the previous production rate of nearly four million barrels a day (b/d).

International financial transaction has been another important target of the sanction which has had a strong impact on the Iranian economy. Although the sanction did allow for transaction for sale of medicine, and exemptions was provided following the earthquake of 2012, the complexity of the sanction has led international banks to avoid all transactions. To stay on the safe side, most international banks were reluctant to carry out transactions with Iranian banks to avoid getting entangled in the sanctions. Consequently, Iran has engaged in barter trade to omit the sanctions.

Under the negotiation for the Joint Plan of Action (JPA), partial lifting of the sanctions was enacted in 2013. This included among other a partial relief of Iran's oil exports and international bank transactions. Further steps to lift the sanction has been made following the JCPOA in July 2015.

## AGRICULTURAL PRODUCTION

Globally, Iran is a significant producer of agricultural products. It is among the top twenty producers for a range of commodities, including wheat (11<sup>th</sup>), vegetables (6<sup>th</sup>), chicken (7<sup>th</sup>), dates (2<sup>nd</sup>) and potatoes (11<sup>th</sup>)<sup>12</sup>. Overall, production has been increasing steadily since the late seventies, with a few exceptions<sup>13</sup>. In 2008, severe frost and drought caused a sharp drop in production, particularly for grains and legumes, which has not reached the same level again.

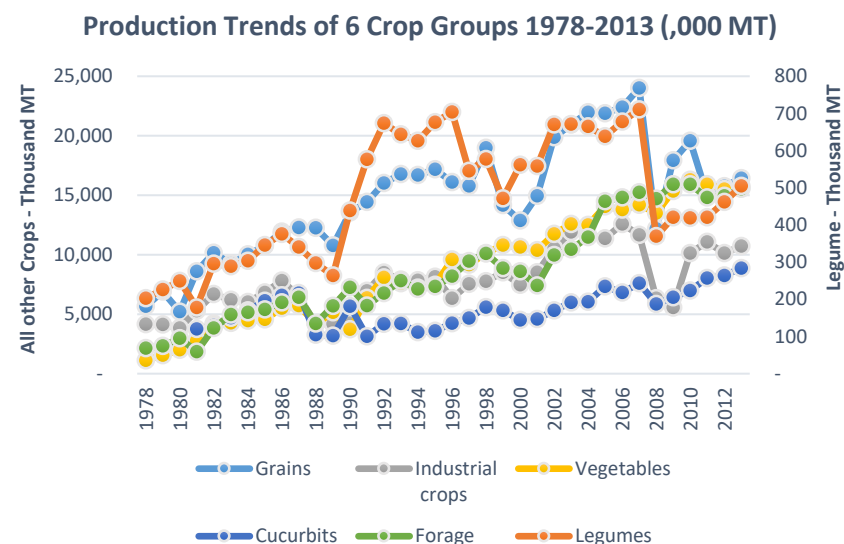
The Ministry of Agriculture Jihad stated goal is for Iran to become self-sufficient for a range of products, including wheat, barley, maize, oil seeds, sugar beet, sugar cane, poultry meat, red meat, milk, eggs. However, comparing 2006 with 2011, the production per capita has fallen in almost all

the agricultural sub-sectors<sup>14</sup>. Further efforts to strengthen the agricultural production would be needed to achieve self-sufficiency.

## CROP PRODUCTION

Crop production has increased over the past decades. The drought in 2008 severely affected the production of grain and industrial crops, and the production of recent years has not reached the pre-drought level.

Figure 2. Crop Production Trends for six major crops, 1978-2013 (MT)



Source: Ministry of Agriculture Jihad

The main crops in Iran are wheat, barley and maize. Wheat is the most important grain in Iran and accounts for 70 percent of the grain production.

<sup>12</sup> FAO, 2012 data. Appendix. <http://faostat.fao.org/site/339/default.aspx>

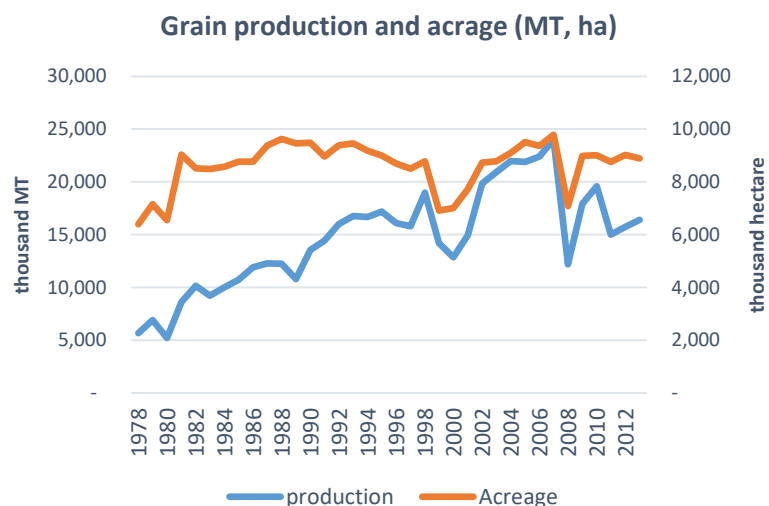
<sup>13</sup> (Table 1.2 and graphs)

<sup>14</sup> Include table. (It would be better to compare with latest data available, 2013, particularly since 2011 also seems to an exceptional year. ISC should have population figures for non-census years as well.)

Iran was ranked as the 16<sup>th</sup> wheat producers in the world in 2013<sup>15</sup>. The Ministry of Agriculture Jihad declared that Iran’s production of wheat fully covered domestic demand in 2006, but the drought in 2008 and the subsequent fall in production made it necessary to resume import of wheat.

Acreage used for grain production has remained between 8,500 and 9,500 hectares since the early 1980s. Figure-3 shows the area used (hectare) and the total production of wheat (metric tons - MT). The increase in production is mainly due to improvements in yield, through modernisation and irrigation, rather than the increase of the cropping area. The table also shows the deep impact of the drought in 2008.

Figure 3. Grain Production (metric ton) and Acreage (hectare) Trends



Source: Ministry of Agriculture Jihad

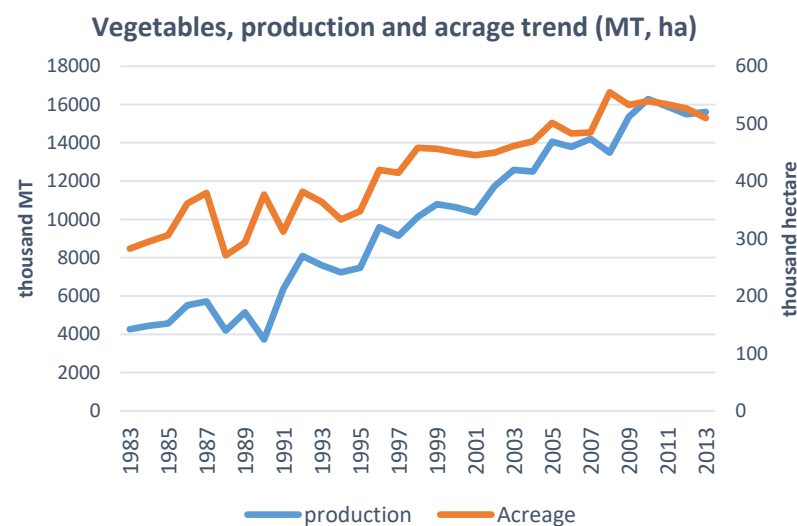
**Industrial crop** includes sugar beets, sugar cane, cotton, oilseed and tobacco, of which the two first make up over 90 percent of the production. Industrial crops account for about 16 percent of the total agricultural production in

<sup>15</sup> FAO STAT

2013. Almost 98 percent is cultivated by irrigated farming. Due to the drought in 2008, production fell below half the 2007 level by 2009. Since 2010 the production increased significantly, but it remains below the 2007 record harvest.

The most important **vegetables** in Iran are potatoes (34% of total in volume), tomatoes (34%) and onions. Due to the modernization of the production, including the use of greenhouses for production of tomatoes, the yield has increased significantly.

Figure 4. Vegetable Production and Acreage Trends



Source: Ministry of Agriculture Jihad

The production of **cucurbits** includes watermelon, melon, and cucumbers. Except for 2008, the production has increased steadily, reaching a record production in 2013 of almost 9 million tons. Almost the entire production comes from irrigated land.

**Forage** production includes hay, corn and clover. The annual production has been around 15 million MT since 2005.

The production of **legumes**, includes peas, beans and lentils, represented less than one percent of the total agricultural production in 2013.

**Horticulture crops** in Iran includes apples, grapes, oranges, dates and pomegranate. The production has continued to grow every year since 2008, and total production reach almost 16 million MT in 2013.

For several decades, Iran has seen a steady increase in the yield of most agriculture products. Apart from grains, the yield has continued to increase after the 2008 drought. Table-1 shows that the yield has fallen significantly for grains and legumes between 2005 and 2013, while it increases for most of the commodities. While the decrease in yield explains almost all the reduction in production of grains, acreage is the main driver in the decrease of legumes.

**Table 1. Percent change in production, acreage and yield between 2005 and 2013**

	Production	Yield	Acreage
Grains	-25	-20	-7
Legumes	-21	-7	-15
Vegetables	10	8	1
Cucurbits	21	17	3
Industrial products	-8	37	-33
Fodder	7	14	-6
Garden	28	8	18

Source: Ministry of Agriculture Jihad

Further modernization of the agricultural sector in Iran would increase the yield and the production. Table-2 shows that the yield is much higher for irrigated land compared to non-irrigated land for all commodities. For most commodities, more than 90 per cent of production comes from irrigated

land, with the exceptions of grains and legumes. Even though the yield is almost four times higher using irrigation, as much as 55 and 80 percent of acreage used for grain and legumes production is rainfed.

The world average yield for wheat is 3.01kg in 2012/13<sup>16</sup>. This is more than twice the yield of non-irrigated production (1.38kg), but also significantly higher than the irrigated wheat production (2.38kg) in Iran. Water shortage is a serious concern in Iran, requiring more efficient use of water in the agricultural sector. According to FAO, the availability of agricultural land is not a major constraint, but rather the availability of water for the development of these lands<sup>17</sup>.

**Table 2. Share of irrigation and rain-fed acreage and production, Yield ratio of irrigation to rain-fed**

	Share of acreage%		Share of production%		Ratio of irrigation yield to rainfed
	Irrigation	Rainfed	Irrigation	Rainfed	
Grain	45	55	77	23	4
Legumes	20	80	48	52	4
Vegetables	92	8	96	4	2
Cucurbits	95	5	99	1	4
Industrial Products	81	19	89	11	21
Fodder	86	14	92	8	2
Garden	84	16	92	8	2

Source: Ministry of Agriculture Jihad

The grain production varies by province from the lowest at 79 thousand MT in Bushehr Province to the highest at 2,086 thousand MT in Kermanshah Province. Map-4 illustrates the grain production by province in 2013. The major production areas are distributed in the northern, north-eastern, and south-eastern provinces. The highest seven provinces, namely Khuzestan,

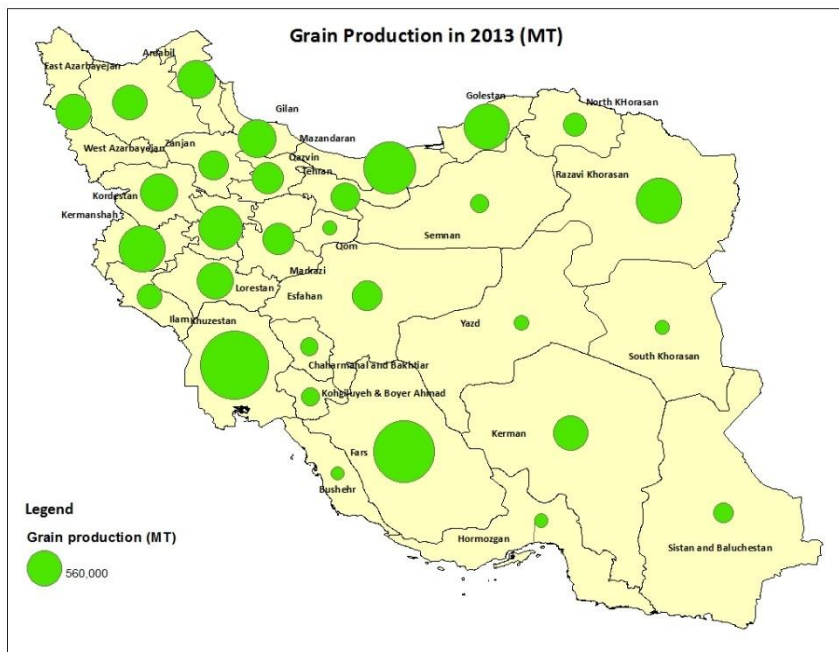
<sup>16</sup> <https://www.statista.com/statistics/237705/global-wheat-production/>

<sup>17</sup> [http://www.fao.org/nr/water/aquastat/countries\\_regions/irn/index.stm](http://www.fao.org/nr/water/aquastat/countries_regions/irn/index.stm)

Fars, Mazandaran, Kermanshah, Golestan, Razavi-Khorasan, and Hamadan, produce more than half of the national grain production.

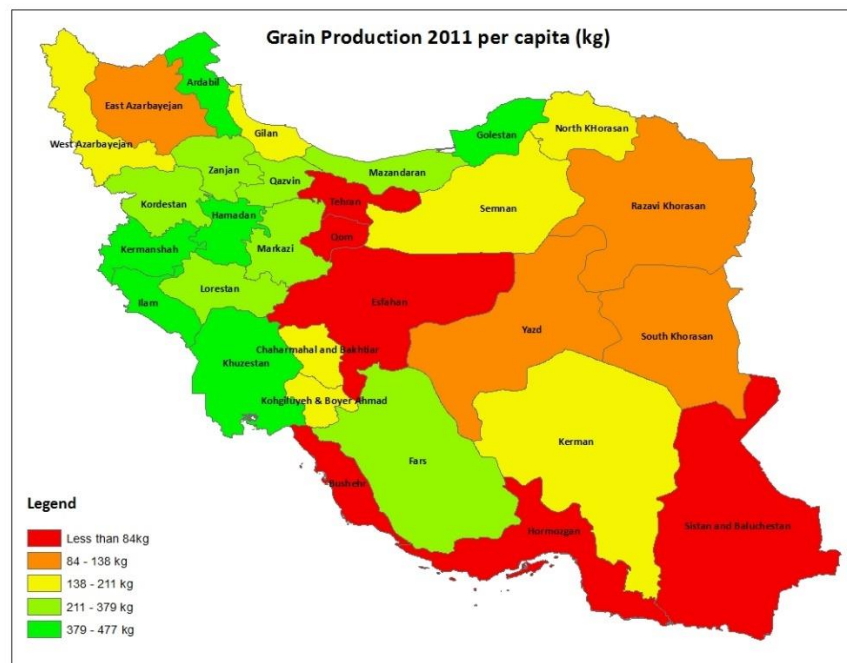
Per capita grain production is extremely low in the central, southern and the western provinces (Map-2). Populated urban areas such as Tehran, Isfahan and Qom, as well as low production provinces including Busher, Hormozgan, Sistan-va-Baluchestan and Yazd, had lower production per capita. The lowest per capita grain production was at 31kg in Tehran and the highest in Ardabil at 477kg. Almost half of the provinces were self-sufficient in the grain production in 2011.

Map 4. Grain production in 2013 (MT)



Source: Ministry of Agriculture Jihad

Map 5. Per capita grain production in 2011 (kg)

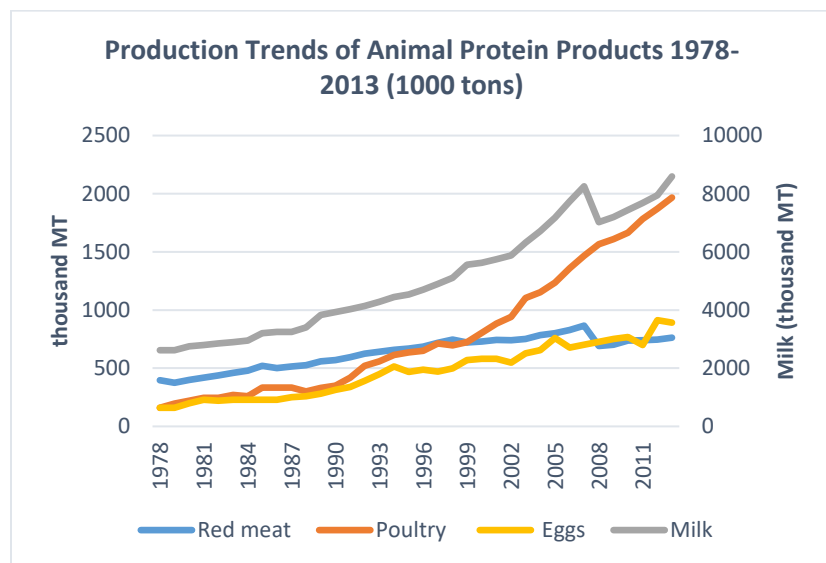


Source: Ministry of Agriculture Jihad

## LIVESTOCK AND POULTRY

The production of livestock and poultry has increased with an average annual growth rate of 3.8 percent the last forty years. It accounts for 31 percent of the value added in agriculture sector, and 4.5 percent of GDP.

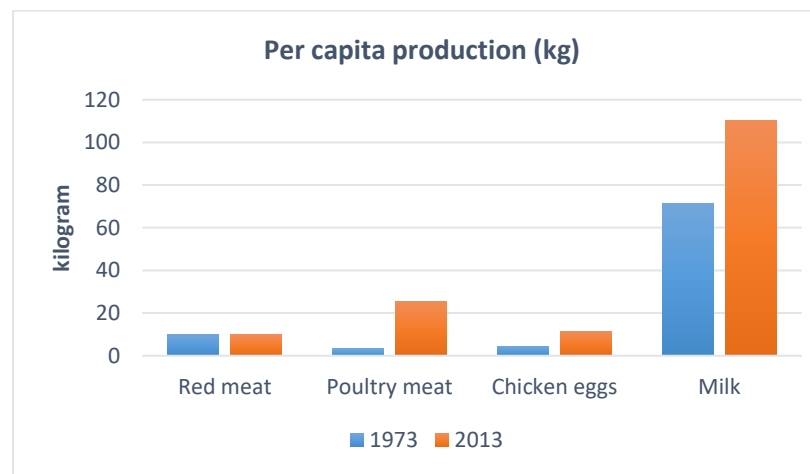
Figure 5. Production Trends of Animal Protein Products



Source: Ministry of Agriculture Jihad

The **poultry** industries were established sixty years ago, with imported chicken, and it has grown immensely. There are almost 2.2 million traditional poultry producers, which accounts for 10 per cent of the production while about 20,000 industrial and semi-industrial producers' accounts for 90 percent of production<sup>18</sup>. The consumption of chicken meat surpassed consumption of red meat in 2006. The per capita consumption per year was 21kg in 2008, compared to the global average of 12kg.

Figure 6. Per-capita production livestock and poultry products



Source: Ministry of Agriculture Jihad

The majority of chicken feed, as oilcake and corn, is imported. Shortage due to import restrictions and sanctions has caused fluctuation in the poultry production and prices.

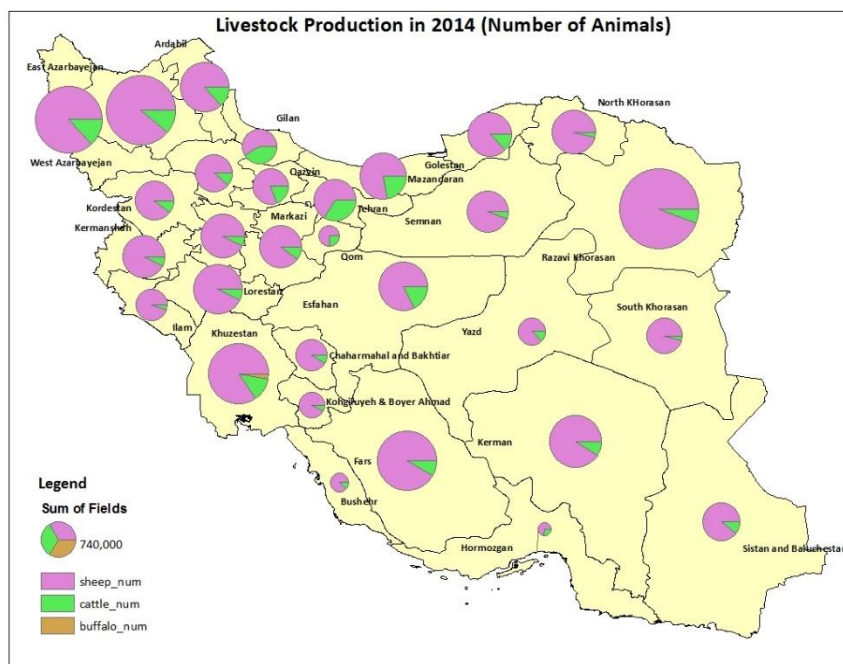
Livestock include sheep, goats, cattle, buffalos and camels. The number of sheep and goats fell significantly in 2008, from 79 million to 72 million in one year. The number of sheep and goats have remained around 72 million since 2008<sup>19</sup>. The number of cattle fell by 13 percent in 2008 but increased by 17 percent the following year.

<sup>18</sup> 2014 agricultural census, CSI

<sup>19</sup> FAO.



## Map 6. Livestock Production in 2014



Source: Ministry of Agriculture Jihad

## AQUACULTURE

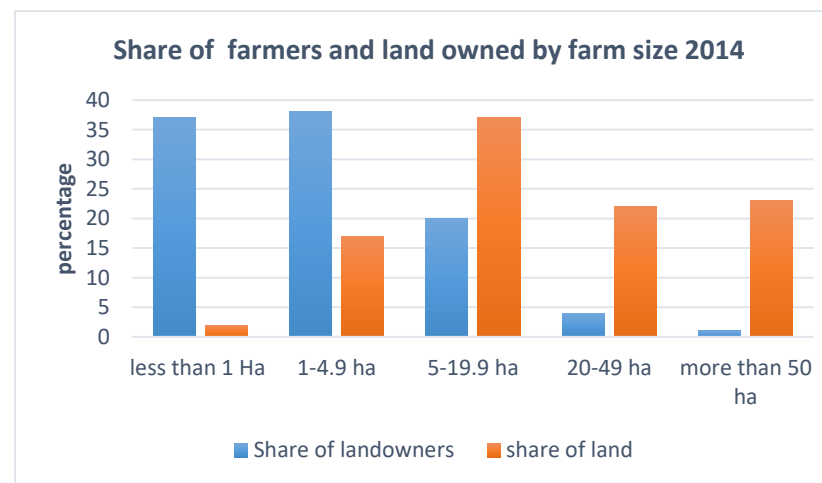
Traditionally, fish was part of the staple food near the Caspian Sea in the north and the Persian Gulf and Oman Sea in the south. However, due to unsustainable fishing and pollution, the production and consumption in these regions has fallen. Meanwhile, more than thirteen thousand aquacultural units have been established across the country, with the majority in the province of Gilan.

<sup>20</sup> Agricultural census 2014, ICS.

## LAND HOLDING AND INFRASTRUCTURE

The agricultural system in Iran is a combination of traditional and modern systems, and of small self-sufficiency farms, medium sized and large commercial farms. Seventy-five percent of the farmers own less than 19 percent of agricultural land in 2014. On the other side of the scale, five percent of farmers own about 45 percent of the land<sup>20</sup>. More than 2.5 million farmers own less than 5 hectares of land in 2014. Cooperative companies use about 5 percent of the land and commercial companies cover around 14 percent. The latter are mainly located in the province of Khuzestan.

Figure 7. Share of Farmers and Land Owned by Farm Size in 2014



Source: Ministry of Agriculture Jihad

Overall, the agricultural infrastructure in Iran's central and urban areas is good, while it is weaker in remote rural areas. The storage facilities are concentrated in central regions. The total capacity seems sufficient, but some provinces are poorly covered. The general infrastructure in urban areas is well developed, but it is not the case in remote rural areas. In case

of emergencies, roads can be a barrier in event of emergencies, delaying the provision of assistance. The transportation fleet for agricultural products is outdated, contributing to the high food loss/waste.

## FOOD BALANCE

### AGRICULTURAL TRADE

Iran's import of agricultural products has grown faster than its export, resulting in a negative and growing trade balance. In 2012, import reached more than 20 million tons, while export remained below 5 million tons. As share of consumption, Iran imports 45 percent of consumed rice, 90 percent of consumed cooking oil, and 50 percent of consumed sugar<sup>21</sup>.

Until 2008, the value of the exported products in US dollar was almost as high as the value of imported products, but since 2008 the trade deficit has increased, reaching \$8 billion in 2013.

As a consequence of the sanctions, the majority of Iran's trade have shifted from Europe to Asia. The main trading partners in 2011 was China, Iraq, UEA, India, Afghanistan and Turkey. Trade with China has gone from barely €3 billion in 2002 to over \$44 billion in 2011. Because of the sanctions on financial transactions, Iran has had to resort to barter trade with international trading partners. Iran has engaged in barter trade with among other India, exchanging oil for wheat and other products. In addition to being inefficient, barter trade is more difficult to control and it is linked to increase in corruption and crime.

As part of the measures to enhance national food security due to sanctions, price volatilities and climate change, Iran has increased its reserves of wheat from 3 months to 6 months in 2012.

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<sup>21</sup> ICR, note 147

## FOOD LOSS

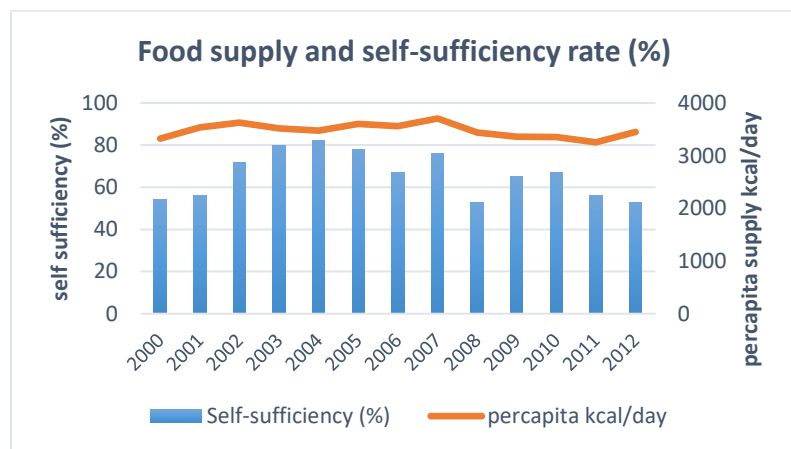
According to the Ministry of Agriculture Jihad the total food loss in 2013 was 17.8 percent. The rate of food loss has remained high and is only slightly lower than the 2003 rate of 18.9 percent. The amount of food loss would be enough to feed 15 million persons. The reduction of loss would to a large extent reduce the dependence on food import. Just for wheat, the total loss and waste in 2013 was 3 million tons, while import in the same year was 4 million tons. The reduction of loss was included as a priority area in the 4<sup>th</sup> national development plan for 2005-2009, but further efforts to reduce food loss would be recommended.

## FOOD SELF-SUFFICIENCY

Food self-sufficiency rate, measured by the percentage of the provision from domestic production against the total supply, was at 53 percent in 2012. The rate reached the highest of 82 percent in 2004, then after has declined (Figure-8).

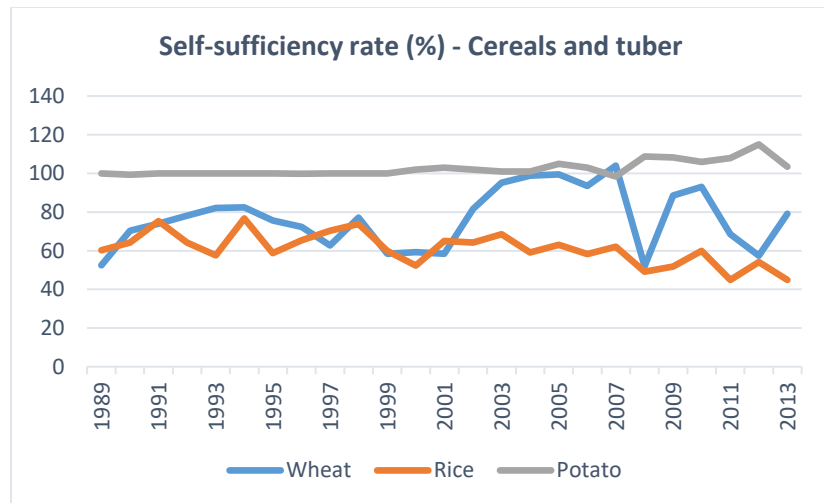
Self-sufficiency rates vary by commodity and by year. The rates for wheat have been in a declining trend over the recent years after reaching the near self-sufficiency in 2003-2007. As of 2013, the rate was at 79 percent (Figure-9). Regarding livestock and poultry products, the country maintains self-sufficiency, though it is worth noting that a large portion of these products depend on the import of feed like corn, oilcake and barley. Sugar has shown a high fluctuation because of the changing trade policies and the policy to protect the production. In recent years the rates have declined to 40 percent in 2013 (Figure-10).

Figure 8. Food supply and self-sufficiency rate



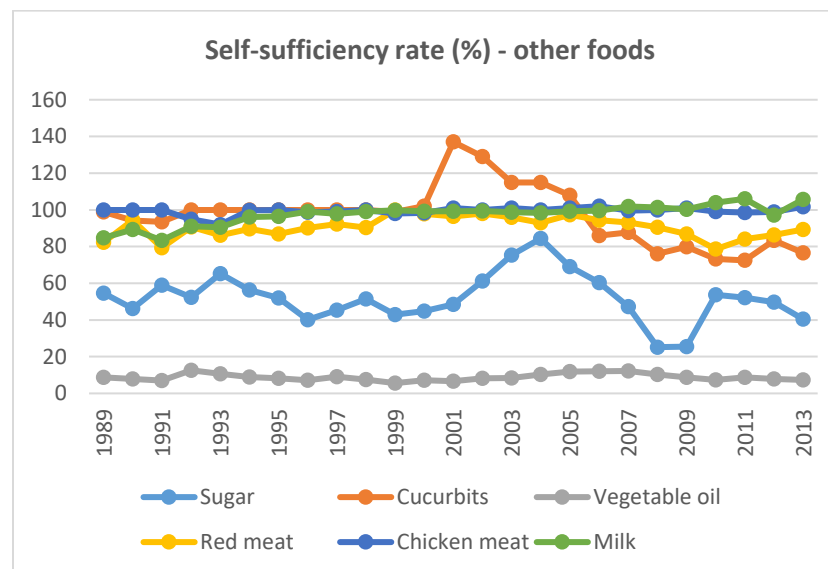
Source: Iran Chamber of Commerce, Industries, and Mines, 2014

Figure 9. Self-Sufficiency rate (%) – Cereals and Tuber



Source: Iran Chamber of Commerce, Industries, and Mines, 2014

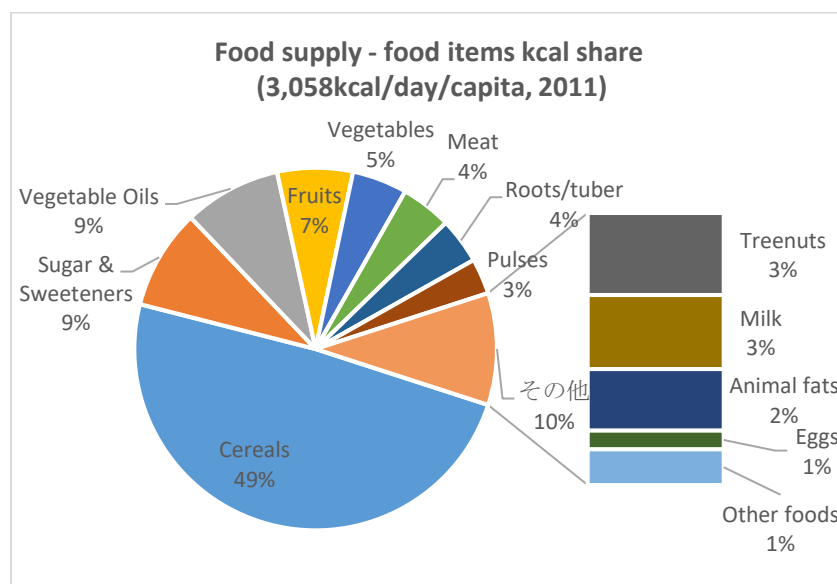
Figure 10. Self-Sufficiency rate (%) – other foods



Source: Iran Chamber of Commerce, Industries, and Mines, 2014

Cereals account for almost half of the kcal supply in the Iranian diet, and eighty percent of the cereals for human consumption is wheat, while the remaining some twenty percent is rice. Wheat is mostly produced locally while some 40 percent of rice is imported.

Figure 11. Food supply – kcal contribution of food groups



Source: Food Balance Sheet Iran 2011, FAO STAT

Table 3. Food Balance Sheet Iran, 2011

	Domestic Supply (1,000 MT)					Domestic Utilization (1,000 MT)				
	Production	Import	Stock Var.	Export	Total	Food	Feed	Seed	Waste	Other Uses
Wheat and products	12,339	75	3,124	362	15,177	11,484	2,200	868	621	4
Rice (Milled Equivalent)	1,832	1,194	-	5	3,021	2,204	734	45	37	2
Barley and products	2,854	823	-	-	3,677	48	3,324	121	183	
Maize and products	2,747	3,647	1	6	6,388	189	5,862	18	320	
<b>Cereals</b>	<b>19,782</b>	<b>5,742</b>	<b>3,125</b>	<b>373</b>	<b>28,276</b>	<b>13,925</b>	<b>12,132</b>	<b>1,053</b>	<b>1,162</b>	<b>6</b>

Source: Food Balance Sheet Iran 2011, FAO STAT

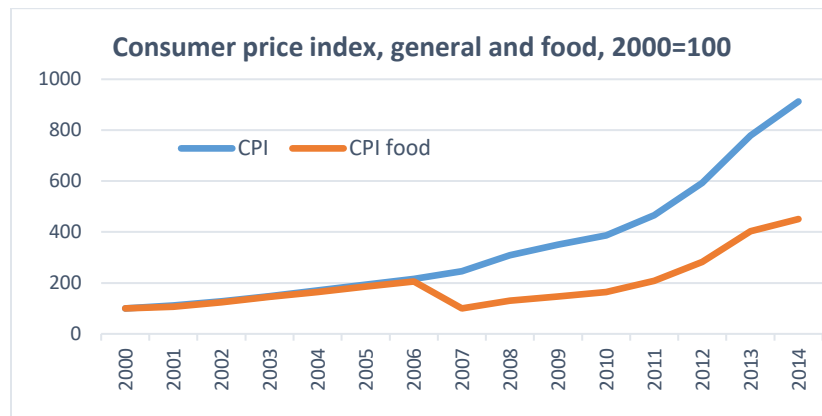
## FOOD MARKET SITUATION

### FOOD PRICES

Globally, food prices have seen a strong increase over the last decade, with a price spike in 2008, leading to an international food crisis, followed by a new, but less severe spike in food prices occurred in 2011. According to FAO's food price index, global food prices have been falling since 2011<sup>22</sup>, which is contrary to the price trend in Iran.

The inflation rate in Iran has been two-digit for the last decade, with year-to-year inflation reaching over 40 percent in 2012. Several factors have contributed to the increase in prices, including the introduction of the Targeted Subsidy Reform and the intensification of international sanction. As can be seen in the Figure-12, both general prices and food prices in Iran has increased sharply the last few years, while the figures of the 2014 food prices shows a sign of improvement.

Figure 12. CPI Trends 2000-2014



Source: Statistical Centre of Iran

Following the agreement in July 2015, setting out the schedule for lifting of the sanction, one would expect the prices to stabilise. At the same time, the

government of Iran is in the process of implementing the second phase of the TSR, gradually reducing subsidies further on important input to the agriculture production.

### STRUCTURE

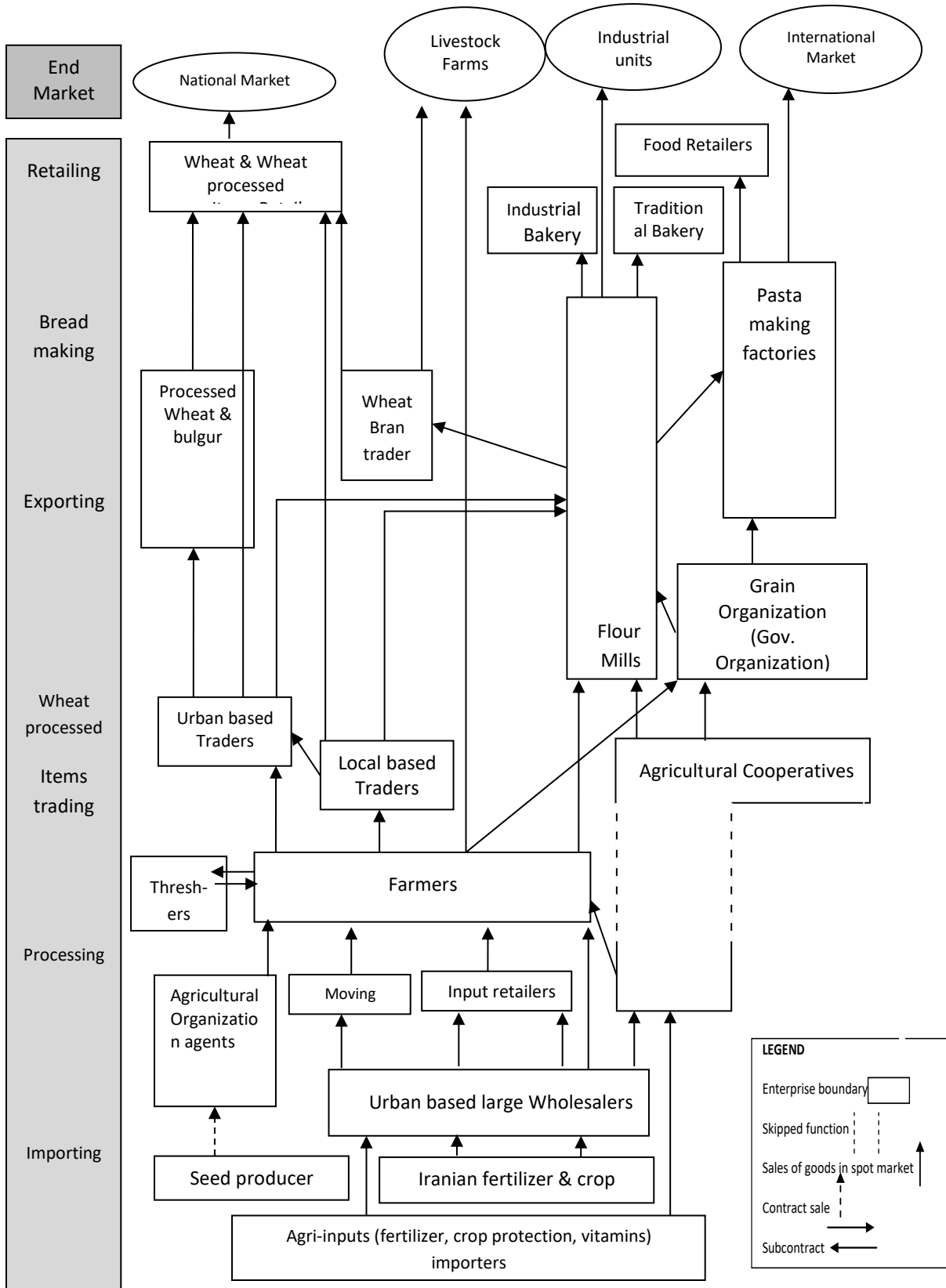
The food market in Iran combines element of free market and government control. Specifically, the government is concerned with key staples such as wheat, milk, rice and chicken, regulating both prices and import. The government exercise its policies through the Economic Council and Consumer and Producers Protection Organization, and regulates import of commodities that are in short supply. In addition, the government's Trading Cooperation of Iran plays an important role in the purchase, storage and distribution of key food products.

The government is an important input supplier through agricultural cooperatives, and the Ministry of Agricultural Jihad is the main supplier of seeds. In addition to the subsidies on water and energy, the government also subsidies certain inputs, like fertilizers. However, many farms buy additional fertilizers at market price due to limited availability of the subsidized inputs. The inflation adjusted price increase on important inputs as fertilizers, seeds and pesticides between 2008 and 2013 has been very high.

The government is the main purchaser of wheat, although after 2012 the government has allowed a larger share of private actors. Many products, like tomatoes, are only traded on the free market. Middlemen in the food market play important role of setting the prices, especially in big cities like Tehran. Farmers try to maximize the gain through bringing their products directly to wholesalers, and/or agricultural cooperatives. See the Diagram below for the wheat value chain mapping.

<sup>22</sup> FAO <http://www.fao.org/worldfoodsituation/foodpricesindex/en/>

# Wheat Market Structure

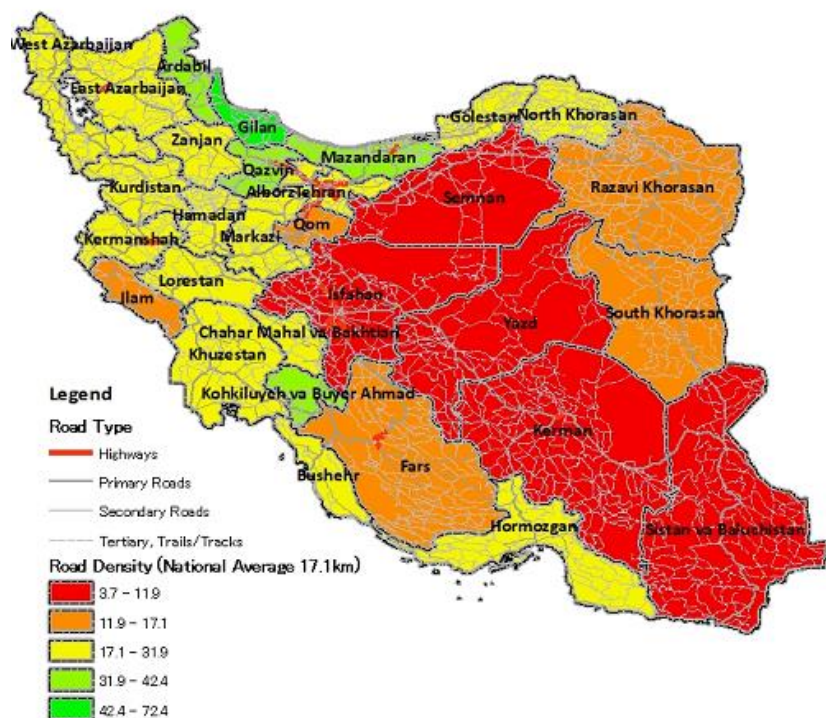


Municipalities, especially in big and medium cities, have established vegetable and fruit markets in different districts of the cities where commodities are cheaper though the quality is lower than shops. These markets have contributed to an increased competition, forcing the surrounding shops to adjust their prices.

Road network in Iran is good overall, and the quality of the vehicles and storage facilities are the limiting factor for the sale of agricultural products, especially among the smallholder farmers in remote areas. See Map-4 for the road network and road density in Iran.

Map 7. Road Network and Road Density

### Road Density (km road per 100 sq km) by Province

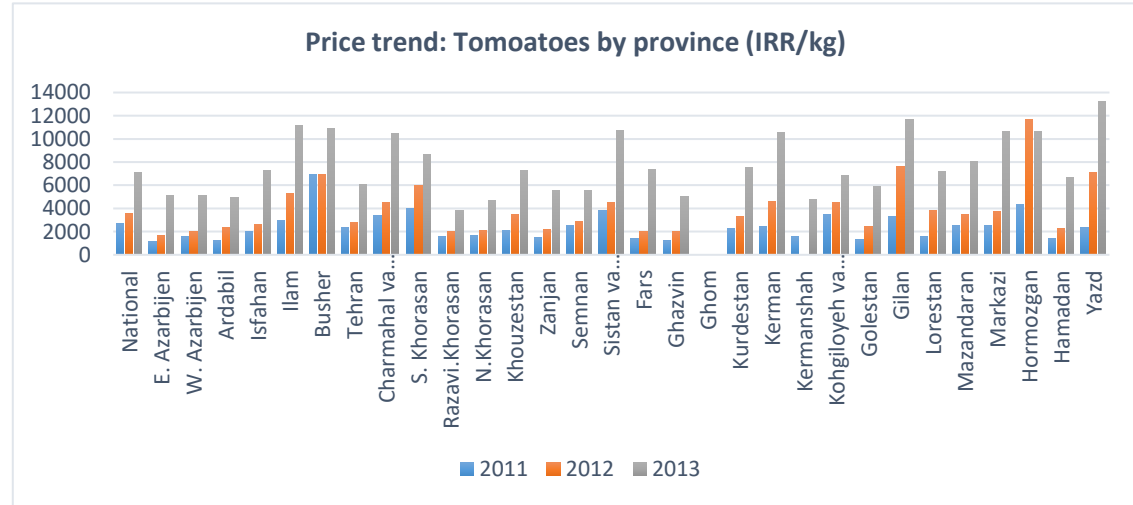


Source: Statistical Centre Iran

### MARKET INTEGRATION

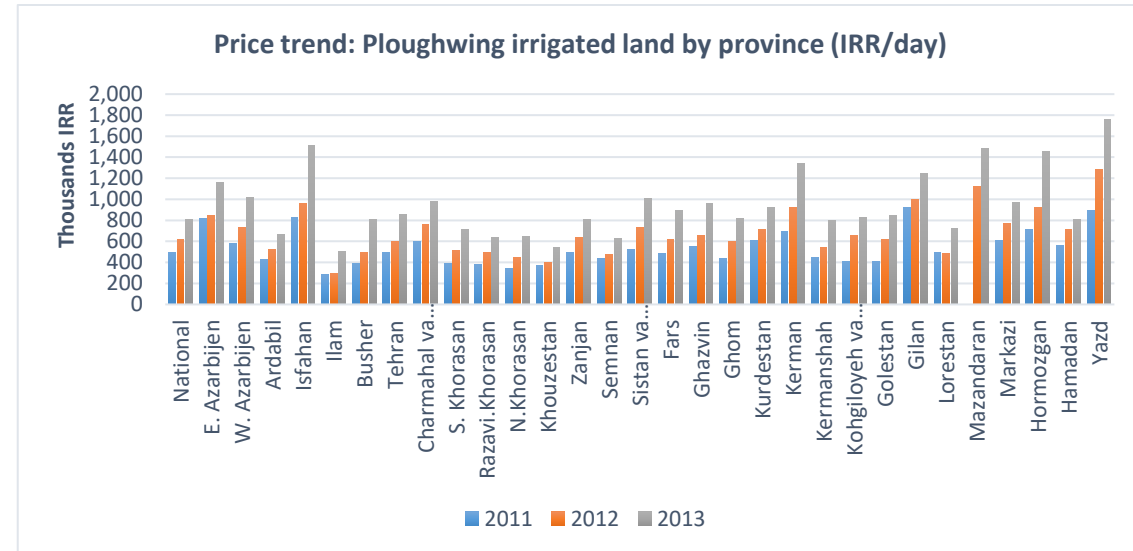
Market integration is a measure to look at whether markets make food available and keep prices stable. Integrated markets can be defined as markets in which prices for comparable goods do not behave independently. Two goods and services are looked at here: gate prices for tomatoes and agricultural wage (ploughing). The Figures indicate that some markets do not seem to be well integrated with the rest of the country, showing a high level of fluctuations that do not follow the national trend (Figures 13, 14). Specifically, in 2012 and 2013, markets were not well integrated for these goods and services.

Figure 13. Price Trends – Tomatoes by province



Source: Statistical Centre of Iran

Figure 14. Price Trends – Ploughing irrigated land by province



Source: Statistical Centre of Iran



## HOUSEHOLD FOOD AND NUTRITION SECURITY

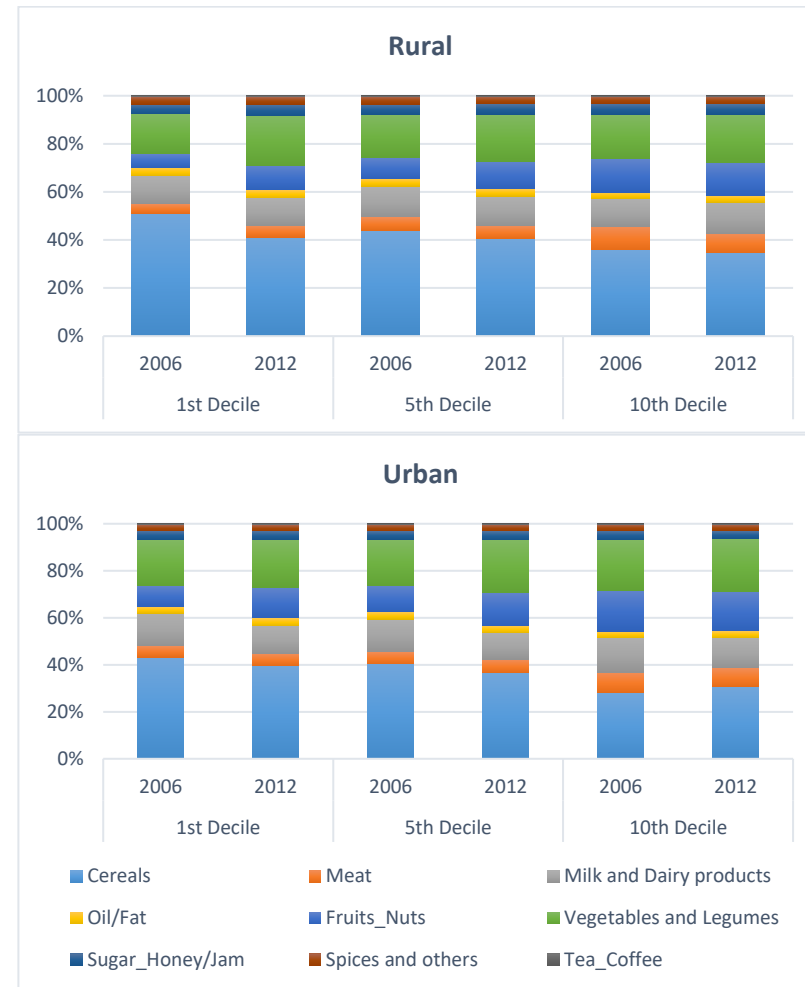
### FOOD CONSUMPTION

Food consumption habits among Iranian households over the past years have not changed significantly across the income deciles (Figure-15). Overall the share of cereals consumed has reduced in 2012 compared to 2006 across the income groups both among rural and urban households. Rural households are likely to have a higher share of cereals compared to urban households. Richer households tend to have a higher consumption share of meat and fruits/nuts with lower cereals in both rural and urban areas.

The consumption pattern for the ten income groups shows that the share of different food groups consumed is very similar for all deciles (Figure-16). Not surprisingly, in the 1<sup>st</sup> decile, the poorest households, the share of meat consumption is lower than in the higher income groups, but the average consumption pattern is very similar. The highest share of grain consumption is around 40 percent, which is well below what would be considered a high staple consumption as per the global standard (above 60 percent).

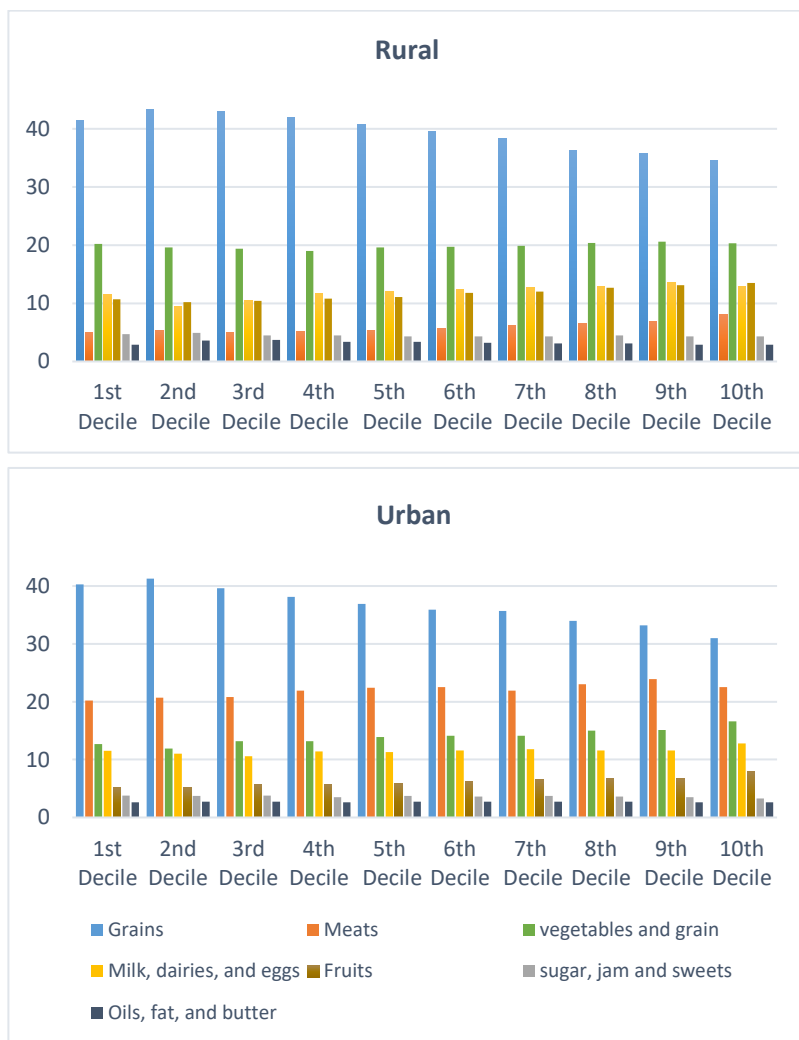
The Central Bank of Iran found that the quantity of food consumed both by rural and urban households have fallen considerably from 2004. The share of different food groups remains almost constant over the years, as seen in the Figures 15 and 16.

Figure 15. Share of Food Groups consumed in 2006 & 2012 by Income Decile



Source: Statistical Centre of Iran

Figure 16. Share of Food Groups consumed by Income Decile



Source: Statistical Centre of Iran

#### BOX: NATIONAL FOOD BASKET

According to the article 34 of the 5<sup>th</sup> National Development Plan (2011-2015), Ministry of Health and Medical Education (MHME) is to prepare optimum food basket for different age groups. The latest available food basket composition is presented in the table below.

Food	gram/capita/day	Food	gram/capita/day
Wheat	310	Red meat	38
Rice	95	Poultry and fish	64
Pasta	20	Egg	35
Grains	26	Dairy	250
Potato	70	Vegetable oils	35
Vegetables	300	Sugar	40
Fruits	280		

#### NUTRITION

Nutrition is an integral dimension of the food security concept. In addition to sufficient quantity of food, the quality and variety of food is equally important. Indicators of malnutrition or micronutrient deficiency reveal whether the population is properly nourished. A nutritious diet is particularly important in the first 24 months of a child's life, as well as for pregnant women, to ensure human growth and mental development.

Two large surveys have looked at malnutrition and micro nutrition deficiency in Iran in 2009 and 2012. Both surveys found that malnutrition and micronutrient deficiency was prevalent in some provinces.

#### MALNUTRITION AMONG CHILDREN UNDER FIVE

Malnutrition among children can be measured by their growth development compared to age, and providing information for monitoring the nutritional

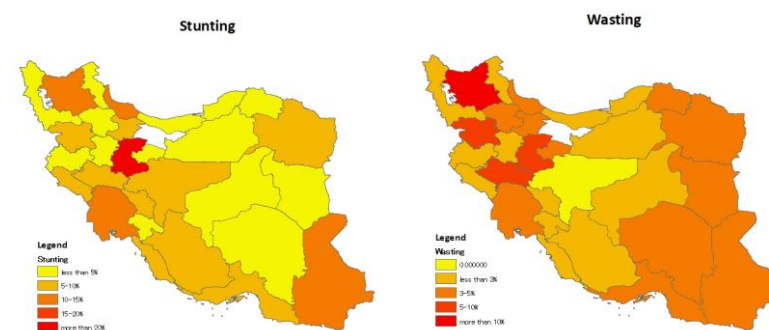
health of the population. A study by IrMIDHS in 2009 looked at three important indicators of malnutrition among children under five, namely underweight (weight for age), stunting (height for age) and wasting (weight for height). Nationally, less than five percent of the children suffer from malnutrition. The highest level of underweight, stunting and wasting was found in the provinces of Sistan va Baluchestan, Hormozgan, Kerman, Kohkiluyeh va Boyerahmad, Isfahan and Razavi Khorasan. In the province of Sistan va Baluchestan, as much as 21 percent of children under five suffer from stunting, and almost 6 percent suffer from severe stunting. Table-4. shows the provinces with the high levels of underweight, stunting and wasting. In the province of Hormozgan, 5 percent of children suffer from severe wasting.

**Table 4. Malnutrition rates (%) among children under five in selected Provinces**

Province	Underweight (Weight for Age)		Stunting (Height for Age)		Wasting (Weight for Height)	
	Severe	Moderate& Severe	Severe	Moderate& Severe	Severe	Moderate& Severe
Sistan va Baluchestan	2.86	12.88	5.97	20.71	3.73	8.96
Hormozgan	4.02	12.05	2.75	10.55	5.05	11.93
Kerman	1.24	9.68	4.45	13.61	0.78	4.7
N. Khorasan	0	3.9	1.39	12.5	1.39	4.86
Kohkiluyeh va Boyerahmad	2.22	6.11	4.07	12.21	1.47	3.49
Razavi. Khorasan	0.8	4.67	3.27	7.63	1.77	6.68
Tehran	0.36	2.73	1.56	5.74	1.36	3.79

Source: Iran MIDHS 2009

**Map 8. Child Malnutrition**



Source: Iran MIDHS 2009

## MICRONUTRIENT DEFICIENCIES

A national survey on micronutrients were carried out twice - first in 2001 and again in 2012. The studies indicate that vitamin D deficiency is increasing among the whole population, with as much as 86 percent of pregnant women suffering from vitamin D deficiency in 2012. In the same period, the level of anaemia and zinc deficiency has improved, testifying the usefulness of government intervention. Since 2001, the government of Iran carried out interventions including nutrition training programs, providing iron and zinc supplements, and enrichment of flour with iron and folic acid. However, the rate of deficiency is still high among the youngest and pregnant women, and with significant regional differences.

**Table 5. Micronutrient Deficiency Rates (%)**

	Age group				
	15-23 month	6 years old child	Adolescents	Pregnant Women	Middle aged
Anaemia	20.7	11.3	10.4	16.0	11.3
Vitamin D deficiency	23.7	61.6	76.3	86.0	60.9
Vitamin A deficiency	19.7	---	---	14.4	---
Zinc Deficiency	19.8	13.4	11.2	27.5	---

*Source: Micronutrient Survey Iran 2012*

#### OVERWEIGHT AND OBESITY

Overweight and obesity as measured by the Body Mass Index, is increasing in Iran. The result of the survey from 2007-2009<sup>23</sup> show that as much as 20 percent of females are considered obese, while 50 percent are overweight. For male the rate is lower, nine percent of men are obese according to their Body Mass Index, and 38 percent are overweight. In general, overweight is a larger problem in urban areas, and overweight is positively correlated with age.

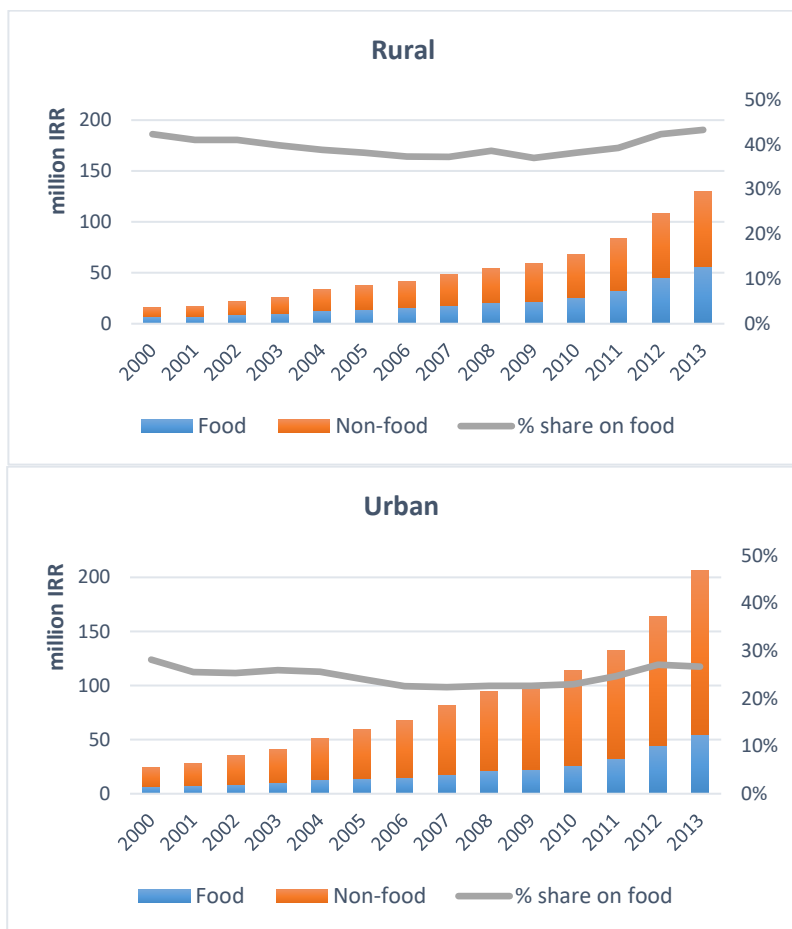
## INCOME AND EXPENDITURES

### EXPENDITURE ON FOOD

The share of food expenditure against the total expenditure is not high in Iran overall. Rural population spends a higher share on food: for urban households, the food expenditure ratio was 26 percent in 2013, while it was 43 percent for rural households. In the food security context, a rate above 65 percent is considered high food expenditure. As illustrated in the Figure-17, even though prices have increased significantly over the last years, the share of expenditure on food over total expenditure remains similar at a low level. At sub-national level, relatively high shares of food expenditure are observed in provinces like Sistan va Baluchestan, Khuzestan, Ilam, South Khorasan, and Kohkiluyeh va Boyerahmad (Figure-18).

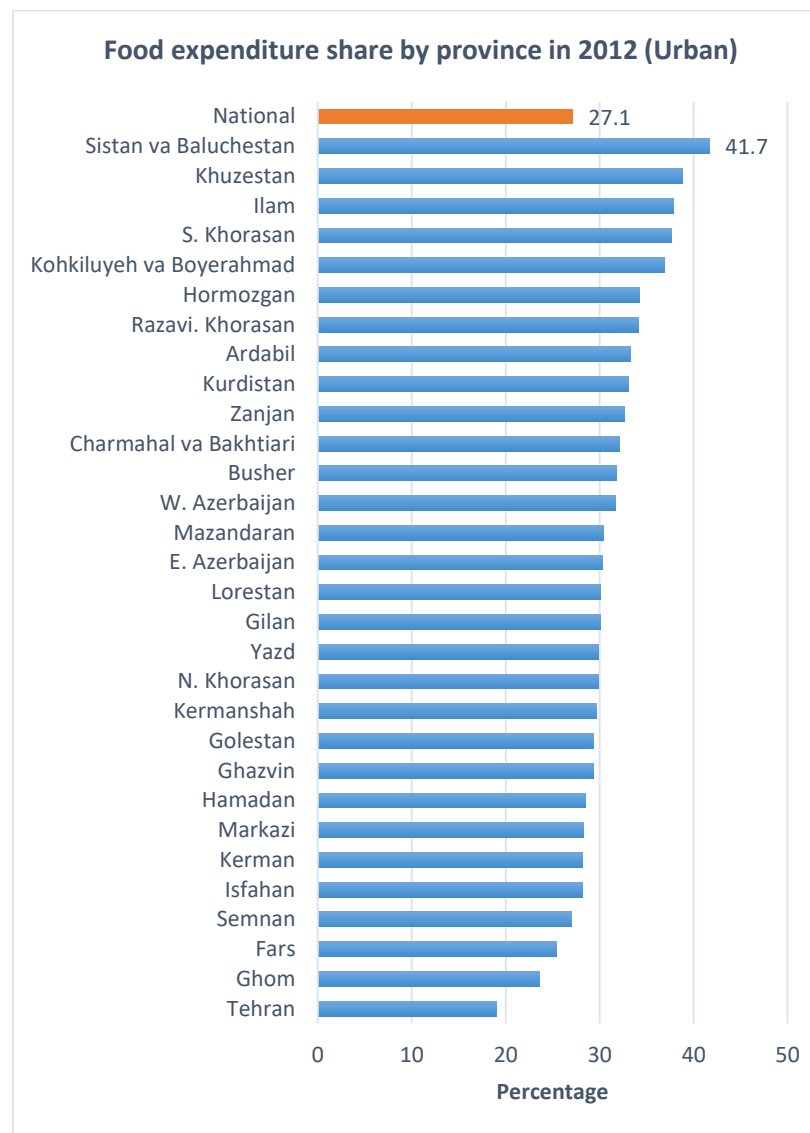
<sup>23</sup> Status on risk factors of non-communicable diseases. 2007-2009.

Figure 17. Annual household expenditure (food and non-food) and food expenditure share



Source: Statistical Centre of Iran

Figure 18. Food expenditure share by province (in 2012, Urban)

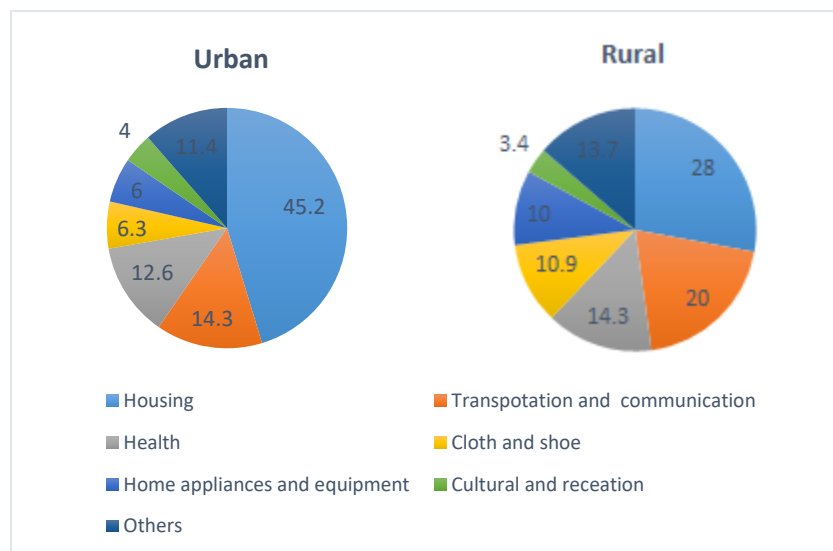


Source: Statistical Centre of Iran

## OTHER EXPENDITURES

Much of the household budget is allocated for housing, followed by transportation/communication and health. Almost half of the non-food expenditure is spent on housing in urban areas while more than a quarter is allocated for rural households (Figure-19).

Figure 19. Non-Food Expenditure (% average of the years 2000-2012)



Source: Statistical Centre of Iran

## HOUSEHOLD INCOME

Household income trend follows a similar pattern as the expenditure, reflecting the high inflation in Iran. Real income has fallen every year since 2010 - between 2012 and 2013 the real income in urban areas fell by 7 percent while for rural area real income fell by 12 percent.

The cost of the Iranian food basket increased with more than 40 percent in 2013. Wage increase has not kept pace with the inflation, leaving the Iranian population with a reduction in their purchasing power (Table-6). Real expenditure, as opposed to nominal expenditure, has fallen with approximately 5% and 12% for urban and rural households respectively in 2013<sup>24</sup>.

<sup>24</sup> 1932 (21/3/13-20/3/14) Household Income and Expenditure Survey

Table 6. Inflation rates, changes in wage/salary and food basket expenses 2004-2013

Year	Annual inflation rate	Minimum wage annual increase (%)	Governmental employee salary increase (%)	Agricultural workers salary increase (%)	Urban		Rural	
					Annual increase of total price (%)	Annual increase of food basket expenses (%)	Annual increase of total price (%)	Annual increase of food basket expenses (%)
2004	15	23	13	17	15	14	14	11
2005	10	14	8	11	104	11	12	11
2006	12	18	15	12	12	13	12	16
2007	18	22	5	14	18	22	17	23
2008	25	17	7	15	25	30	27	36
2009	11	17	18	14	2	10	1	12
2010	12	13	6	4	12	16	20	27
2011	22	9	10	12	22	26	37	47
2012	22	18	15	16	31	45	34	40
2013	31	25	25	24	35	42	36	43
2004/2013	178	176	121	141	191	229	218	265

Sources: Ministry of Cooperative, Labor, and Social Welfare, Statistical Centre of Iran, Central Bank of Iran

## POVERTY

According to the SCI the poverty line in 2010 was 15,300 IRR/day (or approximately USD 1.5). However, many experts believed it should be higher. In 2011, the head of Competition Committee suggested that the poverty line should be at least 41,000 IRR/day.

According to the World Banks estimate for 2010, the number of people living below the poverty line had fallen since 2005. However, they noted that many people lived close to the poverty line. The standard estimate, based on the poverty line of US\$2 and US\$3, shows that less than one percent of the population live below the poverty line. However, increasing the poverty line to \$2.5 and \$3.5 per day would increase the share of the population living below the thresholds to about 4-6 %, that is, around 4.5 million persons. Since 2010, all economic indicators point toward a deteriorating situation for low-income households, suggesting the number of people living below or close to the poverty line has increased. The high inflation and reduction in real income hit the poorest household hardest. Although the TSR provide a cash transfer of \$45 per person per month for targeted households, the high inflation has diminished its value.

Two studies which have looked at poverty in Iran over the last two decades provides more insight into who are poor and where they live. The first analyses income and expenditure data for households in the period 1991-2007<sup>25</sup>, while the second looks at kilocalories consumed in the period 1989-2009<sup>26</sup>. Some of the key findings of these studies are:

- Households where the head of household is either young (below 30), retired or female are more likely to be poor. A household with female head of household is twice as likely to be poor compared to a household with a male head of household. Among the poor household, the share with a retired head of household increased from 8 percent in 1991 to 23 percent in 2007, indicating that this group is getting worse off.

- 25 percent of the poor households were in the provinces of Sistan va Baluchestan, Golestan, North Khorasan and South Khorasan. The same provinces, in addition to Lorestan, also score lowest on the welfare indicator. Tehran score highest on welfare indicators, but it is also the province with the highest rate of welfare disparity.
- Poverty is more persistent in rural areas. However, the share of poor living in rural areas compared to urban areas is decreasing, from 60 percent in 1991 to 55 percent in 2007. This also reflect the movement from the countryside to the cities.
- There has been a significant fall in poverty between 1989 and 2009. The absolute poverty indicator (below 2294 kcal) fell from 37 percent of urban household in 1989, to 16 percent in 2009, and from 46 percent to 27 percent in rural areas. The same study found that the absolute poverty indicator started to rise again in 2005 and 2006 for rural and urban areas respectively, indicating increase in poverty after a long period of improvement in living standards.

According to the SCI, the Gini Coefficient is 36.50 in 2013 (1392). The figure is slightly lower for rural area compared to urban areas. The Central Bank operates with a slightly higher figure, estimating the Gini Coefficient to be 39.44, while the World Banks estimate for Iran is 37.4 in 2013. Given that a Gini Coefficient of 0 means total equality, while 100 signify total inequality, Iran can be considered to have a quite equal income distribution. For comparison, according to the World Bank, Ukraine had the lowest Gini coefficient in 2013 (24.6), while Honduras had the highest (53.7). Figures for 2011, which includes the Gini Coefficient for 131 countries, ranks Iran as number 54<sup>th</sup> on equality.

Figure-20 illustrates the percentage contribution to the national GDP in 2011 by province. A large geographical difference in wealth is observed - Tehran contributes almost a quarter of national GDP, followed by Khouzestan (13 percent) and Isfahan (7 percent).

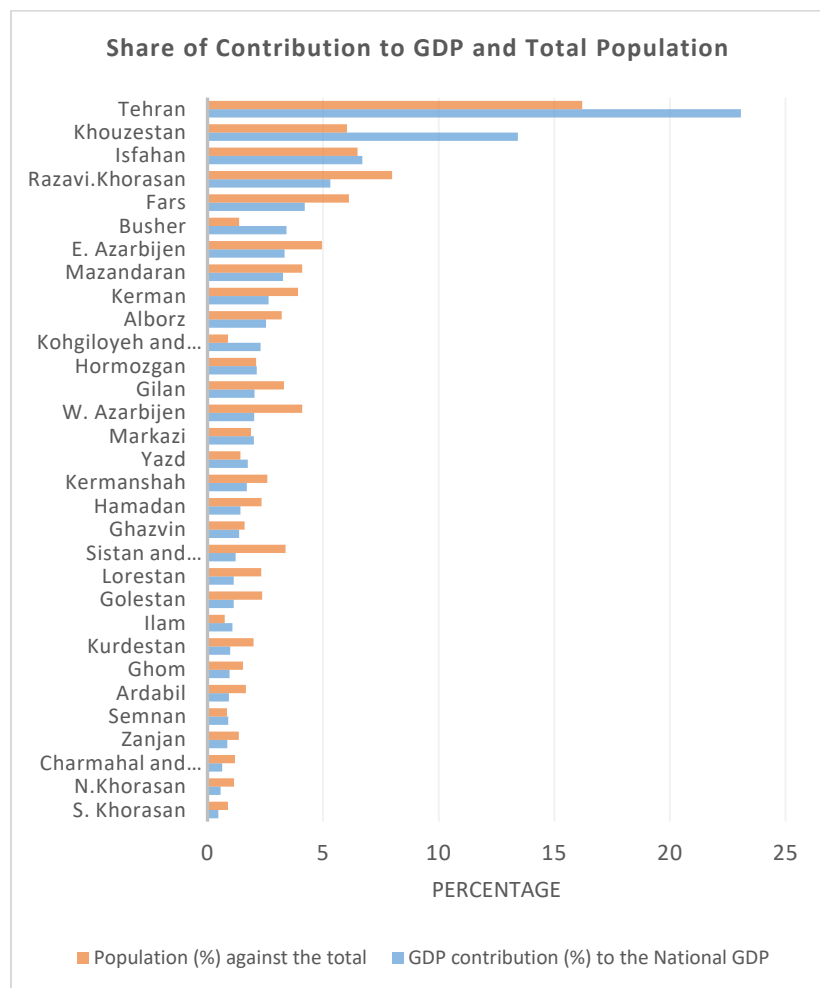
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<sup>25</sup> Farhad Nili (year)

<sup>26</sup> Karimi and Arshadi, 2013: [QUARTERLY JOURNAL OF THE MARCO AND STRATEGIC POLICIES SPRING 2013 , Volume 1 , Number 1](#); Page(s)23 To 42



Figure 20. Provincial contribution to GDP and population



Source: Statistical Committee of Iran

## LIVELIHOODS

Almost half of all employees work in the service sector (46%), while 29 % work in the industry and 19% in agriculture. The distribution varies by province, with a higher number of farming population in provinces like Razavi Khorasan, Kerman, Fars, East Azarbaijan, and Gilan (Figure-21).

Unemployment rate<sup>27</sup> in Iran is 10.6 % in 2014 according to the ISC. The unemployment is particularly high in urban areas, among women and the youth (15-29 years old). Unemployment among the youth was above 25 percent in 2014. In addition, the labour force participation rate is low and falling. The labour force survey for 2<sup>nd</sup> quarter of 2015<sup>28</sup> shows that only 38 % of the population is economically active. The participation rate is particularly low among women, with only 13% of women over 10 years being economically active. Underemployment is also high, at 9.2%, which means that a large number of employees have not been able to find full-time jobs despite trying.

Iran has a very young population, with about 60% percent of the population below 30 years in 2013<sup>29</sup>. A number of young Iranians will be entering the labour market the next years, including approximately 4 million currently attending university.

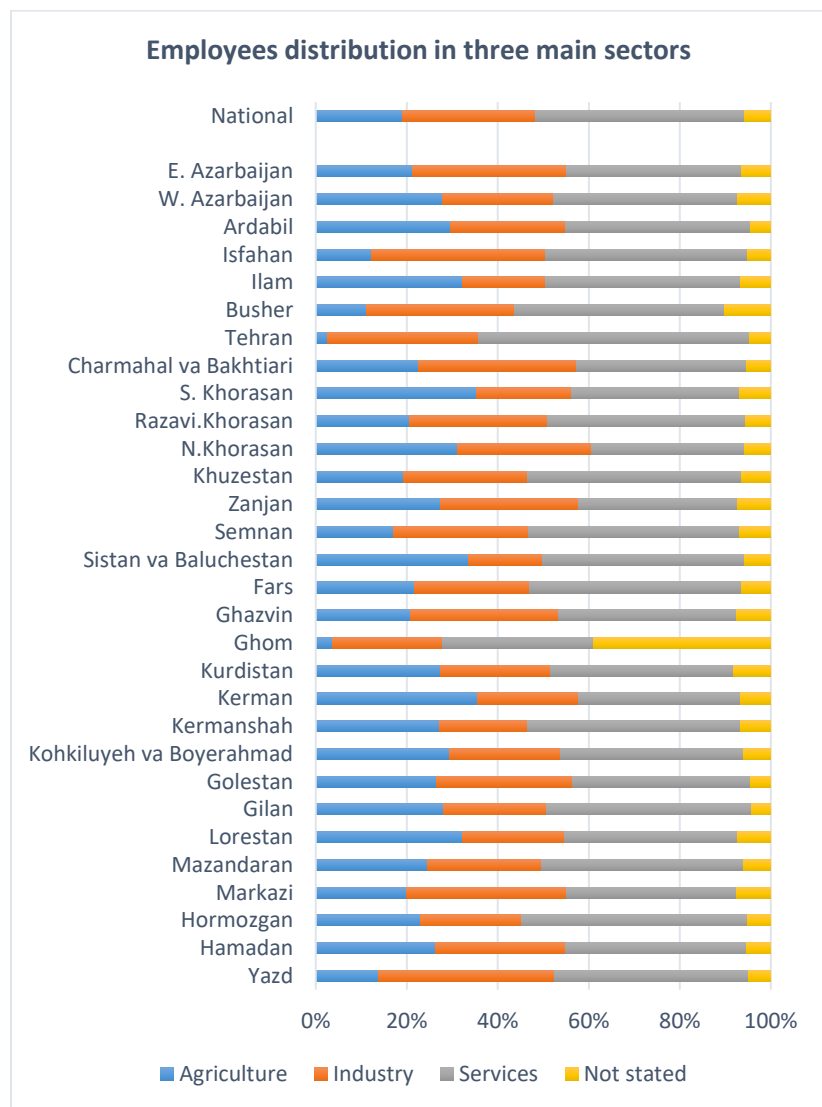
The fall in real income has made it necessary for many Iranian to hold two jobs to make ends meet. According to SCI, as much as 39 percent of employees report that they work more than 49 hours per week.

<sup>27</sup> Unemployed person is an over ten-year old individual who did not work at least for an hour a week prior to the census or left the job permanently and is looking for a job.

<sup>28</sup> (21/3-21/6 2015)

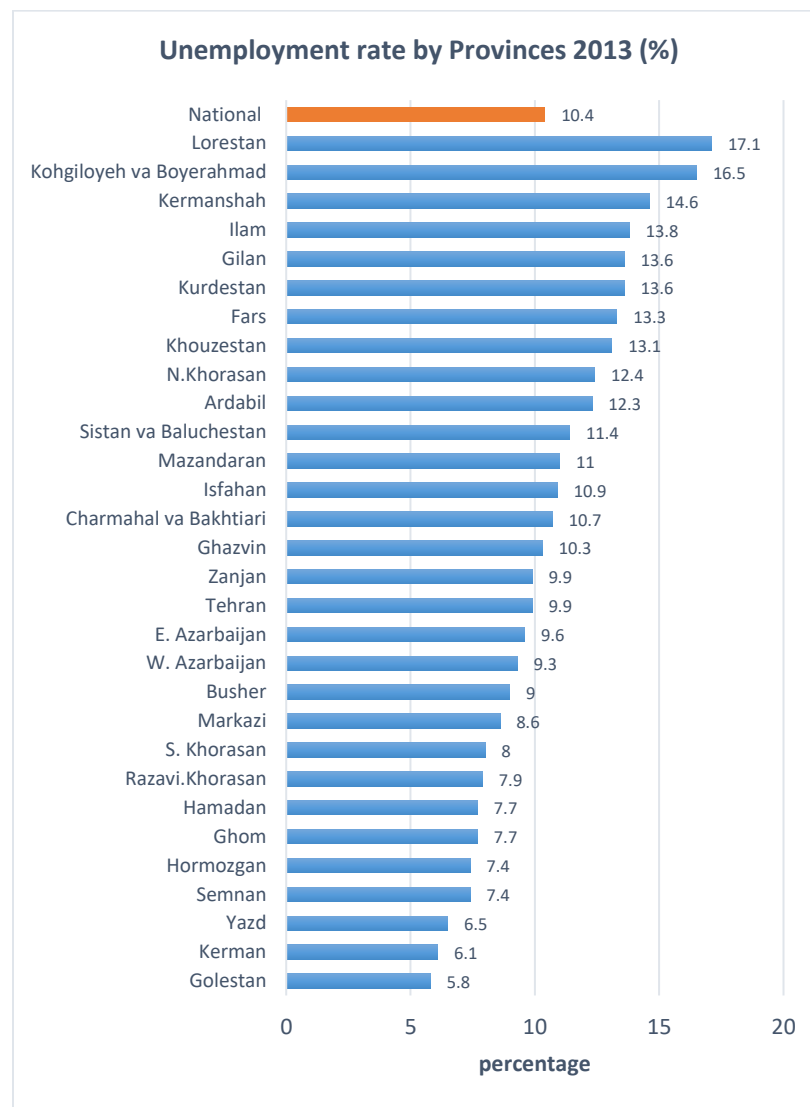
<sup>29</sup> World Bank

Figure 21. Employees distribution in three main sectors by Province, 2011



Source: Statistical Centre of Iran

Figure 22. Unemployment rate by Province, 2013



Source: Statistical Centre of Iran

## ACCESS TO SERVICES

### WATER ACCESS AND SANITATION

According to the 2011 population and housing census<sup>30</sup>, majority of the population has access to clean drinking water. As much as 93 percent of the population has water pipes on their premises, and 2 percent has other kind of improved water sources. The use of unimproved water sources is most common in rural area, and in use by about 10 percent of the rural population.

Almost all Iranians have access to improved sanitation facilities. Only one percent of the rural population does still not have improved sanitation facilities.

### INSTITUTIONS AND ORGANISATIONS PROVIDING SAFETY NETS

In general, the national social protection and safety-nets systems should cover most of the population. However, not all households are sufficiently covered, and the economic crisis has seen more people living closer to the poverty line. A range of government institutions and NGOs provide different types of support to the Iranian population.

Below is a short description of some of the most important institutions providing support to households:

**The Social Security Organization** was established in 1975. It provides both medical services and pension funds, and is present in all provinces. It has 68 hospitals and around 280 clinics, in addition to contracts with more than 5,300 therapeutic centers. In 2012, about 50 percent of Iranians were covered by the SSO.

**Iran Health Insurance Organization** covers about 46 percent of the population according to the census. In addition to government employees, it covers in particular households in rural areas.

**The State Welfare Organisation** provides a range of services and it is running Social Service Centres throughout the country. In addition, it is responsible for the oversight of NGO providing similar services. About 7 percent of the population receives some form of support from the State Welfare Organisation.

**The Imam Khomeini Relief Foundation** provides support to low income households, mainly through cash transfers but also as loans. According to the population census of 2011, almost 11 percent of the population benefitted from support from this organisation.

**The Marty and Isargaran Affairs Foundation** is a governmental organization supporting the wounded soldiers from the Iran-Iraq war, as well as the families of the fallen soldiers. The foundation assists about 3 percent of the population according to the 2011 census.

**The Red Crescent Society of I.R. Iran** has more than 3 million members it can mobilize in the case of disasters. It has proven to be well organised and it is an important contributor in the case of emergencies.

Until 2010, the government subsidised heavily key staples as gasoline, gas, electricity, water and bread. The **Targeted Subsidy Reform** decreased the general subsidies on staple commodities, while providing a monthly cash transfer to almost all households, covering over 70 million persons in the start. The coverage of the cash transfer has been scaled down to target less well-off households. Only Iranian citizens are eligible for the cash transfer. Refugees from Afghanistan and Iraq, who previously benefitted from the indirect subsidies on staple good, are particularly hard hit by the inflation since 2010.<sup>31</sup>

<sup>30</sup> Housing and population census 2011. SCI.

## STABILITY

Iran is subject to both different types of shocks that affects the food security of the population. Over the past decades the country has been hit by natural disasters like earthquakes, drought and floods, as well as economic shocks and political instability of the neighbouring countries.

## NATURAL DISASTERS

### EARTHQUAKES

Iran is located in one of the most active seismic regions in the world and has suffered a large number of devastating earthquakes. In the 20<sup>th</sup> century alone, 22 major earthquakes have claimed over 150,000 human lives and disrupted agricultural and industrial services<sup>32</sup>. In 2003 an earthquake of moment magnitude 6.6 hit Bam, killing more than 30,000 people. The earthquake levelled the ancient citadel of Arge Bam and left thousands homeless. Poor construction standards and virtual non-adherence to building codes aggravated the damages. The most recent major earthquake hit Iran on 16 April 2013, with a magnitude of 7.8. It was felt all the way to New Delhi, but the damage was less severe because it was deep underground and struck a rural area that is scarcely populated in the Iran-Pakistan border region.

The government of Iran has established notable capacities in disaster preparedness and Disaster Risk Reduction (DRR). In 200x Iran adopted a new legislation on disaster management and the establishment of the National Disaster Management Organization (NDMO) to oversee coordination. In addition, the Iranian Red Crescent Society (IRCS) has long experience and resources to assist in emergencies, and more than 3 million members. While the international community provided assistance in the Bam earthquake of 2003, the government of Iran did not need international assistance for the

2013 earthquake. Generally, the Iranian government is only likely to need international assistance in the case of major earthquakes in urban areas.

According to recent seismological studies developed by IIEES and Code 2800 (Iranian Code for Seismic Resistant Design of Buildings) majority of urban centres in Iran are located in high earthquake risk areas (earthquakes with a magnitude of 6-8 on the Richter scale)<sup>33</sup>. That means there is a considerable risk that Iran will suffer from major earthquake in areas with high population density. The rapid urbanisation combined with inadequately regulation of constructions, increase the number of people at risk in case of a major earthquake<sup>34</sup>. Map-5 presents the areas with different degrees of earthquake risk – over 90 percent of the country is exposed to the earthquake hazard. Two densely populated cities – Tehran and Karaj, are located in the areas with higher earthquake risks. In Tehran, with a population of more than 11 million and an underground gas pipeline supplying the whole city, the damages caused by an earthquake would be substantial. It is to be noted that Tehran has not been struck by an earthquake with magnitude above 7 since 1830. Other structures at risk include chemical and nuclear plants and oil refineries; damage to these would have enormous and long lasting environmental consequences, especially for groundwater reserves and ecosystems.

<sup>32</sup> CONOPS, WFP 2014

<sup>33</sup> IACP 2011

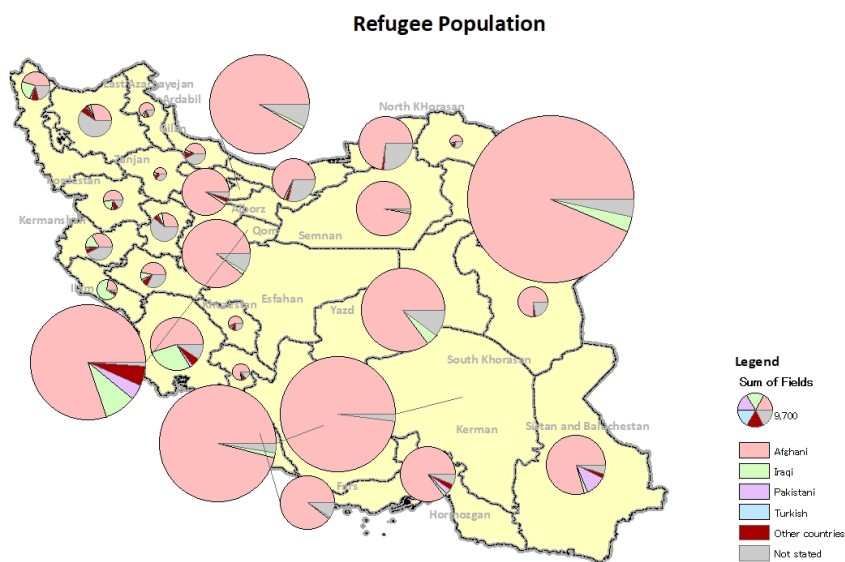
<sup>34</sup> Following the major earthquake of Gilan and Zanjan provinces in 1990, the Government introduced mandatory earthquake building codes for urban areas.



Despite the difficulties of Afghan refugees in Iran, the conflict and instability in Afghanistan could lead to new influx of refugees. Geopolitically, Iran is situated in a highly volatile region with several ongoing conflicts. Possibility of a new influx of refugees from Afghanistan or other neighbouring countries cannot be ruled out.

Iran, and the Bureau for Aliens and Foreign Immigration Affairs (BAFIA) has long experience in hosting refugee populations. Nevertheless, given the current economic situation, the Iranian government might not have the capacity to host a new influx of refugees.

Map 10. Refugee Population in Iran



Source: Statistical Centre of Iran

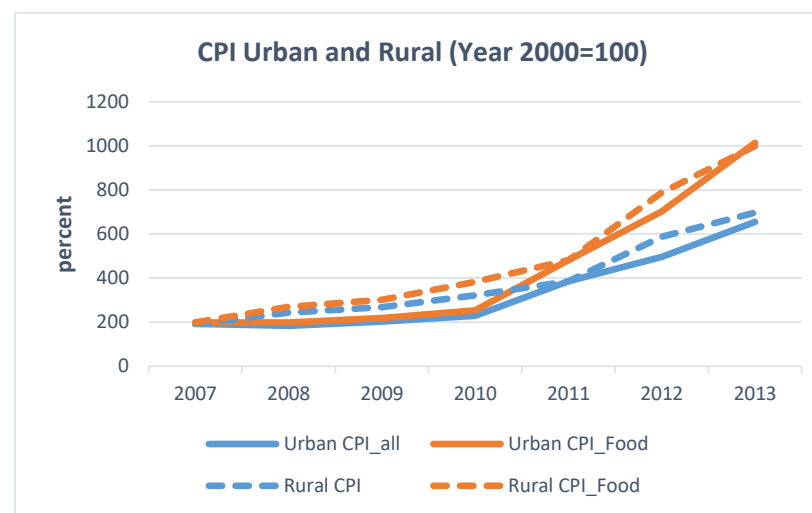
<sup>35</sup> According to the ICR, it is not possible to judge which factors are more significant. “Disaggregating the effects of past conflicts, mismanagement, structural deficiencies, and prior and more recent sanctions is no easy task. Each

## POLITICAL AND ECONOMIC SHOCKS

Iranian economy has suffered from low growth and two-digit inflation over the last years. Several factors have contributed to the stagflation, including the Targeted Subsidy Reform (TSR) and the international sanctions<sup>35</sup>.

Figure-23 shows the inflation trend during the period from 2007 to 2013. The rates hiked in 2010 when the government initiated the implementation of the TSR. The inflation rate reached a peak in 2012, when the year on year price increase was 45 percent according to the World Bank. According to the SCI, the annual inflation of the food, beverages and tobacco was 45 percent in 2013, while the Consumer Price Index was 28.6%.

Figure 23. Consumer Price Index Urban and Rural (base year 2000 = 100)

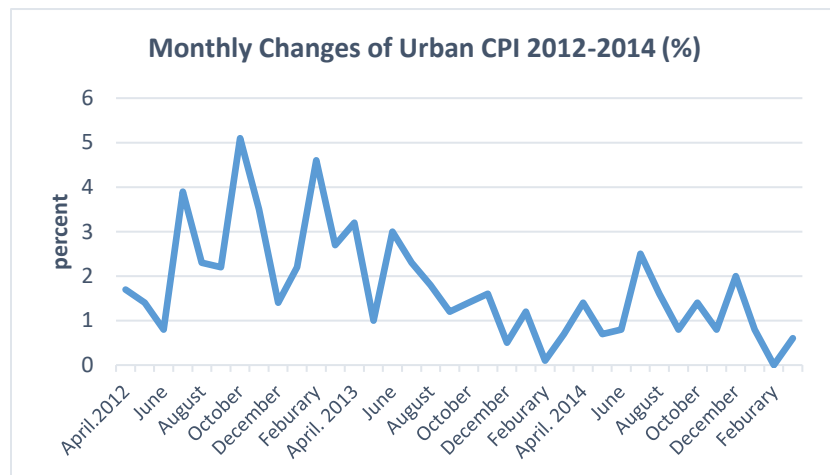


Source: Statistical Centre of Iran

disruption has prompted inflation, currency devaluation, capital flights and brain drain. Analysis is further complicated by the scarcity of reliable official data.”

Figure-24 shows the volatility of the CPI in 2012-2014. The monthly CPI fluctuation was very high in 2012 and the start of 2013. Recent figures from the World Bank/SCI shows year-to-year inflation rates has fallen to 15 percent in June 2015.

Figure 24. Monthly changes of urban consumer price index 2012-2014

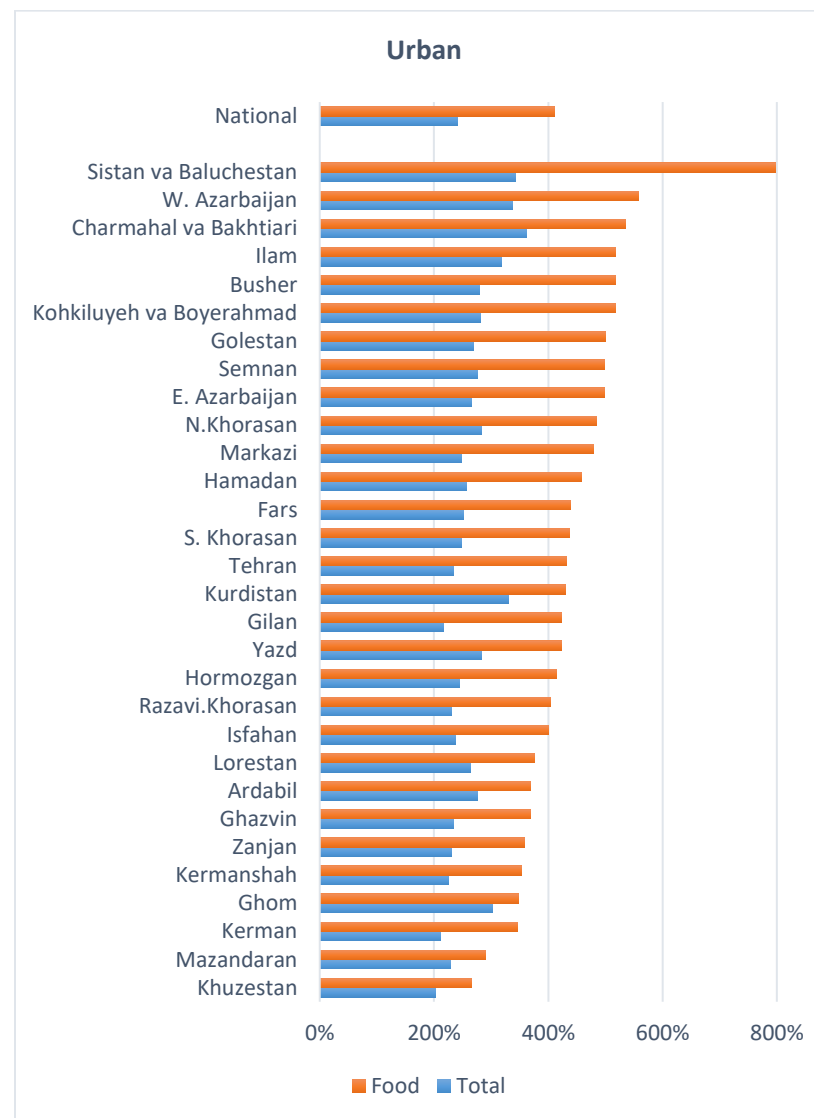


Source: Statistical Centre of Iran

There are significant differences in the changes in food prices at subnational level. Figure-25 and 26 illustrate the percentage changes in the consumer price index for all goods & services (total) and for food in urban and rural areas between 2007 and 2013.

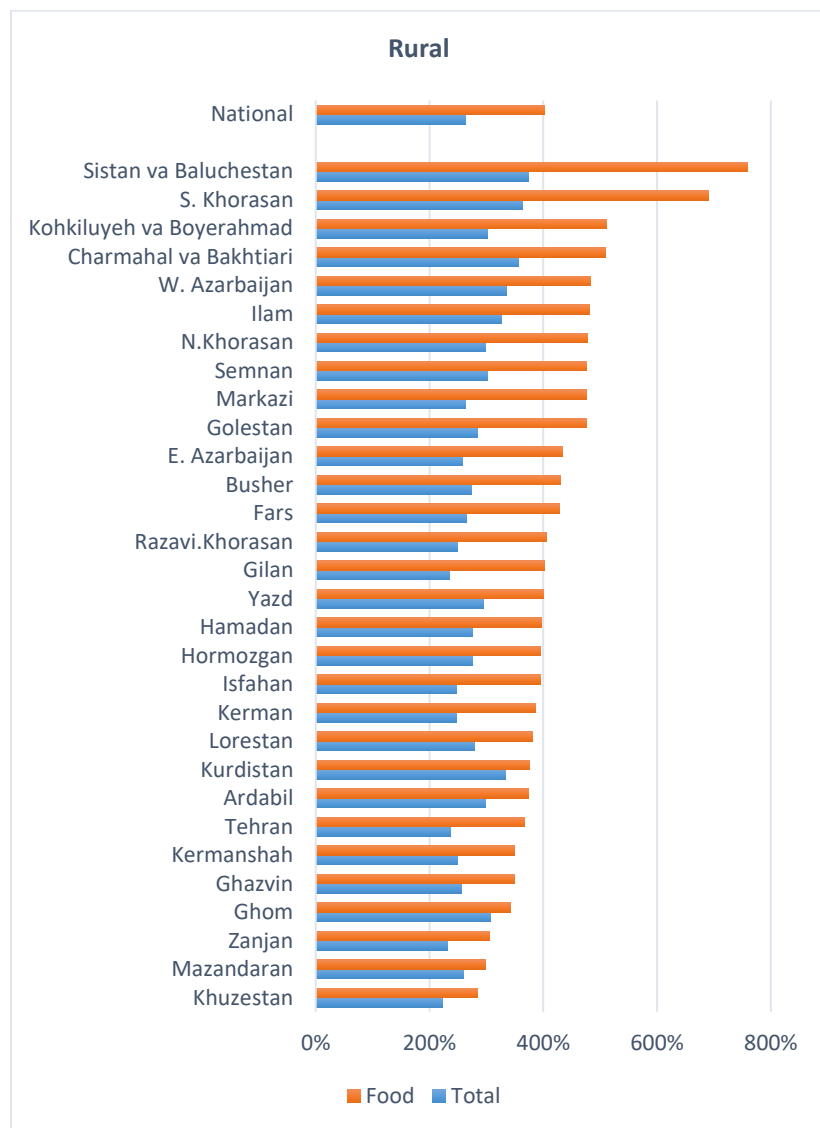
In the Sistan va Baluchestan province, the food price index has increased by almost 800 percent, while the lowest level of increase was found in Khuzestan at less than 300 percent. The wide range of changes indicate that some provinces are particularly vulnerable to the price hike. The worst affected provinces were those with limited agricultural production.

Figure 25. Urban Consumer Price Index Total and Food, % change between 2007 and 2013



Source: Statistical Centre of Iran

Figure 26. Rural Consumer Price Index Total and Food, % change between 2007 and 2013



Source: Statistical Centre of Iran

Although there are still many challenges ahead for the Iranian economy, and further shocks cannot be ruled out, the current development on lifting the sanctions provides a positive outlook for 2016 onwards. Lifting the sanction would unfreeze assets abroad, stimulate the economy and encourage investments and growth.

## CONCLUSION

Based on the analysis, key food security issues in Iran are summarized below for each of the four dimensions of food security:

**Availability:** volatile agricultural production due to climatic and socio-political issues, such as adverse weather, inefficient use of water resources, insufficient investment on agriculture by the government due to budget constraints; increasing reliance on food import for staple foods like wheat as well as livestock feed with the weakened economy owing to economic sanctions;

**Access:** constrained economic access to nutritious food among the poor and the vulnerable due to high food prices, lack/shortage of income generating opportunities and subsidy cut;

**Utilization:** high rates of micronutrient deficiencies, especially among pregnant women and young children;

**Stability:** high or increasing levels of exposure to natural hazards such as earthquakes, floods and droughts; food price hike; political instability of an influx of refugees. It is worth noting that there is a positive outlook on the country's economy, given the lifting of international sanctions.

These issues affect the food security and nutrition situation among the population, specifically the followings:

**The poor and vulnerable:** economic downturn due to the international sanctions has hit the poor vulnerable the most. Subsidy cut has resulted in food price hike, while the compensatory measures like targeted subsidy reform have not sufficiently covered the needy population. Iran is relatively an equal society as measured by Gini coefficient, with a small proportion of the "poor" population. A significant number of people, however, is



considered to live just above the poverty line, and they are highly vulnerable to food insecurity shocks.

**Refugees:** Iran hosts the 4<sup>th</sup> largest number of refugees in the world. Despite its generous policy towards refugees, the existing national social protection/safety-nets measures do not cover the refugee population. Their economic opportunities tend to be limited due to some restrictions for the type of job that refugees are allowed to be engaged. The refugees are mostly from neighbouring countries like Afghanistan and Iraq, and it is not likely that they would return to their home country in an immediate term. Any further deterioration in those countries may result in a further influx in the future.

**Pregnant women and young children:** micronutrient deficiencies are most pronounced among these population groups.

**Youth:** The unemployment rate among the young population is particularly high at above 25 percent, which deserve a special attention given that the country has a high share of the population below 30 years old.

Geographically a higher degree of vulnerability to food insecurity is found in **remote rural areas** due to structural issues. The province of Sistan va Baluchestan, for instance, scores the worst in all the four dimensions of food security. In addition, **densely populated urban areas with a high risk of earthquake** would deserve a special attention, given that the potential impacts of earthquakes can be catastrophic to the extent that the country would require international assistance.