

The Food Security Monitoring System (FSMS) provides a seasonal snapshot of food security in rural Tajikistan by collecting and analyzing data from 665 households, 900 mothers and caregivers, 600 children and 475 key informants every three months.

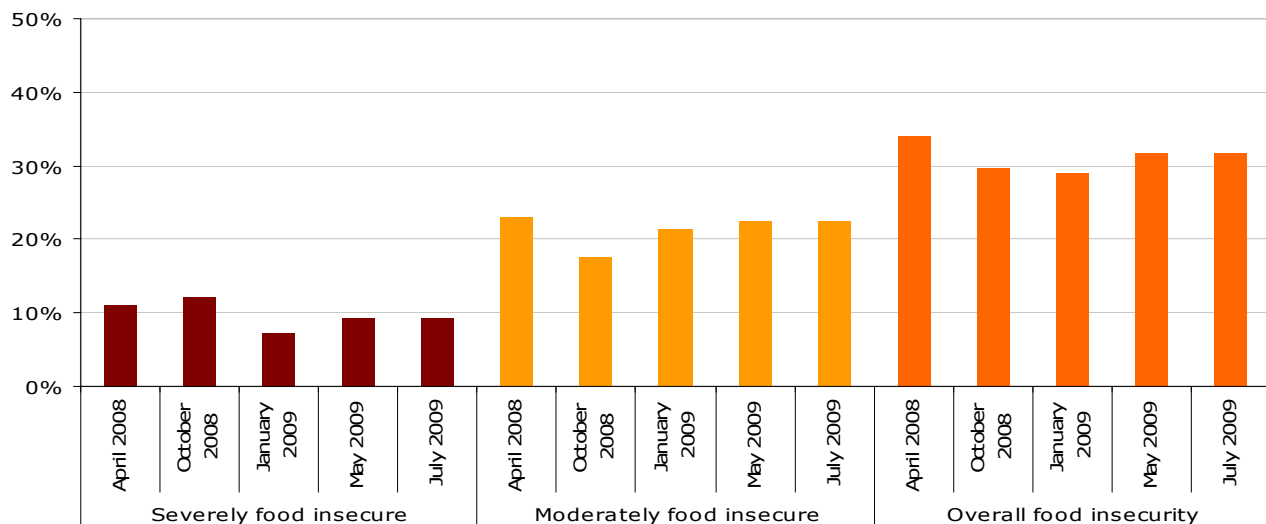
The FSMS can also alert stakeholders to incidents of critical food insecurity requiring short-term interventions. More details on the exact methodology can be found in annexes.

HIGHLIGHTS



- **Acute as well as chronic malnutrition have increased significantly** since January 2009. The almost double increase in wasting appears to be related to a high incidence of diarrhea in children during the summer months. Dietary diversity has improved in both children and women due to greater food availability. Both dietary diversity and nutritional status seemed to be influenced by food availability and access at the household level.
- Around **1.4 million people were identified as food insecure**, 390,000 of them severely. Compared to the previous round (May 2009) the extent of food insecurity in Tajikistan remains the same. More than half of the food insecure people are chronically food insecure. The rest are victims of shocks, which explains variation between zones over time.
- As in the previous round, the **level of severe food insecurity in the country remains at around 9%** of the rural population. The situation did not deteriorate mainly due to a good harvest of wheat, vegetables and fruits and to assistance provided to households affected by heavy rains in certain areas.
- Moderate food insecurity also stands at similar levels as in May 2009. It has mainly decreased in Sughd, but remains at similar levels in other regions. The **lack of improvement of moderate food insecurity** at a time when better physical access should allow households to be food secure is mainly due to external shocks creating pockets of severe food insecurity.
- **Sughd and Khatlon have been replaced as the most food insecure regions by DRD**, due to economic shocks (especially the loss of employment and decrease in remittances). The most food insecure zones in Sughd and Khatlon are the same as they were in May; they can now be seen as priority zones for long-term interventions and also as the most vulnerable to shocks.
- The **outlook for the next three months is relatively good**, thanks to a good harvest. Households will be able to stock food for the hard months to come, to decrease proportion of expenditures devoted to food and to focus on investing in assets or covering other expenditures. But the food price and economic crises still threaten these fragile improvements. Moreover, the increase of expenditures related to education and religious events (end of Ramadan) will add to the precariousness of the most vulnerable rural households.

Food Security Status in Rural Areas of Tajikistan Between April 2008 and August 2009 (estimated % of the total population)



Overview of the overall household food security

This is the first data collection that covers the end of the spring and the summer as well as part of the harvest season (i.e. from May to July, data was collected in the last week of July). Food security was therefore expected to be slightly better due to better physical access and a high percentage of food coming from household's own production, especially of wheat, potatoes, fruits and vegetables. But Figure 1 above does not support this assumption; overall, food security remains at similar levels as it was during previous rounds. Severe food insecurity is still around 9% of the rural population and moderate food insecurity remains close to its level of around 22% of the rural population in April 2008 (after the winter crisis). But as shown in annex 3, food insecurity mostly worsened in some pockets that were affected by severe shocks - severe rains and delays in planting. Places such as zone 5 around Khuroson, which was severely affected by heavy rains over the spring, and zone 17 close to Jirgatol, where the potato harvest failed, have not maintained good food security, lowering the overall average of food security in the country. Elsewhere, some slight seasonal improvements can be noticed, especially in food consumption; households have a much more diverse diet than in previous rounds due to better access to fruit, lower prices of meat and vegetable harvests from kitchen gardens. But financial access to food (lack of income or financial means) remains the issue that keeps food insecurity at high levels as households cannot afford the minimal food basket (TJS 85 per capita per month in July - see annex 2). Some parts of the country (such as zones 6, 14 and 1 - see map 2 in annexes) have been constantly food secure, but others (such as zones 15 and 19) have confirmed their status of chronically food insecure areas. It seems that the strong impact of the economical crisis on households in May has since stagnated, but unemployment remains one of the most cited shocks.

Access to food and availability

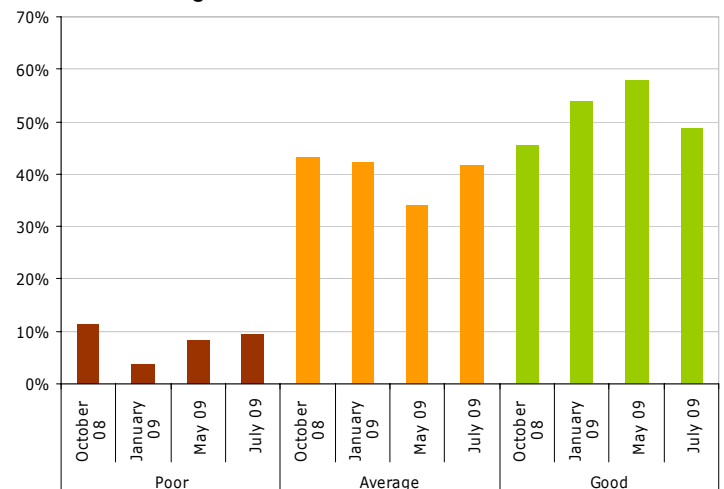
Data was collected in the middle of the harvest season; at the time of the bulletin's writing, reports of record harvests were being circulated. Both household and key informant data confirm that harvests are above average compared to the previous year: 41% of households report better harvests of wheat this year (30% for potatoes, 52% for vegetables). According to farmers, these figures could have been even higher if land had not been damaged by rains and hail during the spring. However good harvests do not seem to be due to investments in the agricultural sector (apart from an increased land allocation to wheat), but to mainly favorable climatic conditions that helped to significantly increase yields in some areas. This is especially clear when considering the main constraints of growing wheat and other crops in the country: the lack of irrigation water (the main constraint nationally), lack of agricultural inputs such as seeds and

pesticides. Much remains to be done to make these results sustainable or reproducible. Good harvests have allowed households to rebuild depleted stocks of the lean season and to bring extra income to households.

More income and fewer debts?

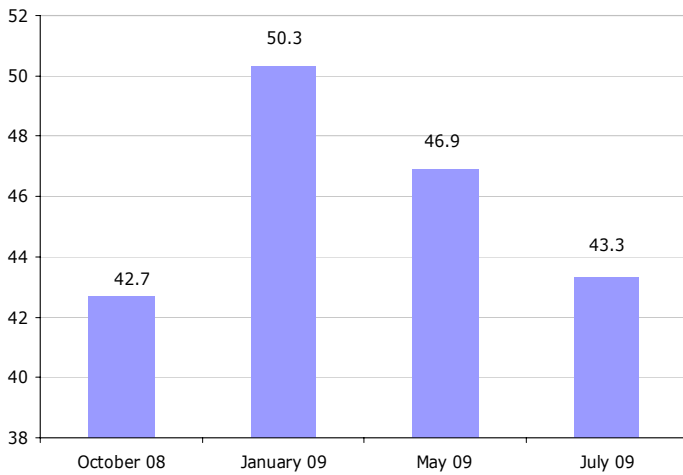
Findings show that food access (measured by looking at what the first source of income is) has deteriorated since May as more households rely on poor income sources, such as begging and borrowing or daily wage labor. The number of households relying on remittances has slightly increased during this round, but remains below last year's levels (from 20% of households in May to 25% in August). More households (around 15%) also depend on livestock for feeding their families. Daily wages have also taken more importance, but households depending mainly on this income are vulnerable to rate fluctuations (decreased in Dushanbe and Khujand regions over the past three months). The decrease in small businesses is also confirmed and correlated with the increase of bankruptcies reported by households. Part of these changes in income is seasonal, while part can be attributed to the financial crisis. For example, trends show that remittances increased in October to get households ready for the winter, but then decreased in January and even further in April due to the financial crisis and winter season. They are now up again thanks to the increase of short-term job opportunities both abroad and in the country during harvest season. The same can be said for the households' perception of their economic situation, which after the lean season has now improved (16% consider it better this round compared to 0% in May). Due to the increased opportunities in the agricultural sector at this season, there is an increase of the number of households possessing more than three income sources and a decrease in respondents who have contracted new debts over the past three months.

Figure 2 - Food Access Score 4 rounds



Food expenditure and sources have changed

Figure 3 - Food Source: central market



Proportion of expenditures dedicated to food have decreased from 70% to less than 65% thanks to better access to food from people's own production, giving households with land a chance to reduce the part of their budget dedicated to food. As a result, there is a shift in the allocation of expenditures to different items such as fuel, transport and health. Households will also be able to save some money for the new school year and the end of the Ramadan. Each zone presents different changes but trends show that the amounts spent on food are higher before the winter and during the lean season, when access to household's own production is limited. Dependence on markets is higher in winter as own production stocks become depleted and market purchases increase. Findings show that even at a time when household's own production is an important source of food for 25% of the households, 53% are still getting more than 70% of their food from either the local or the central market.

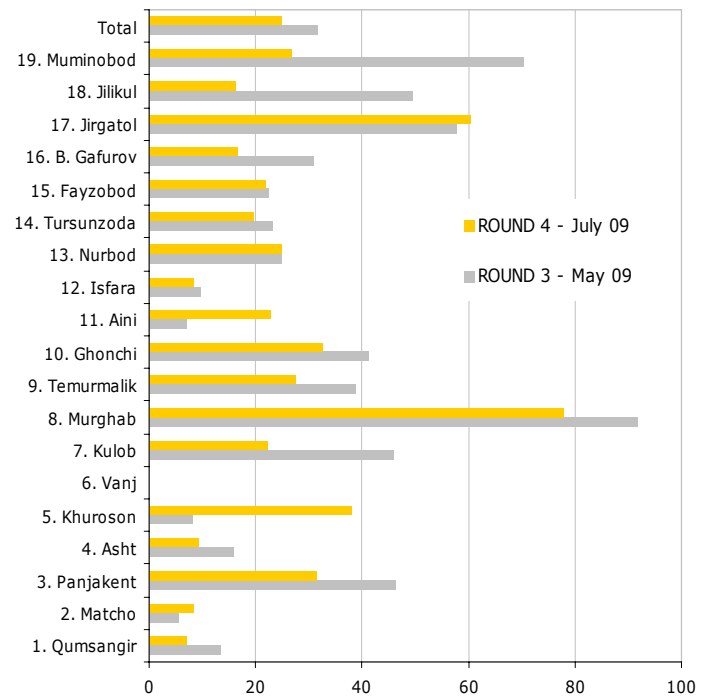
Spring shocks

Some shocks were repeatedly reported over the past year and identified as chronic issues that need to be addressed at any time of the year: no access to drinking water, agricultural water, high food prices, human diseases and crop failure. The low resilience to these shocks relates to structural factors and requires significant investment to strengthen households' response capacity to overcome them. Most of the vulnerable households and communities cannot address these issues on their own. But these shocks have different impacts on households' food security depending on the time of the year; findings from this round show that the decrease in access to drinking water is accompanied by an increase in human diseases. Also, in some zones, high food prices are not the main shock affecting households anymore, again thanks to the harvest: this is shown in slight increase in prices of some items. More transitory shocks include economic shocks induced by the economic crisis; loss of income of a family

member and bankruptcy of small business are on top of that list. Although these shocks were less frequently reported than in May, it shows that some households are still being affected by the crisis.

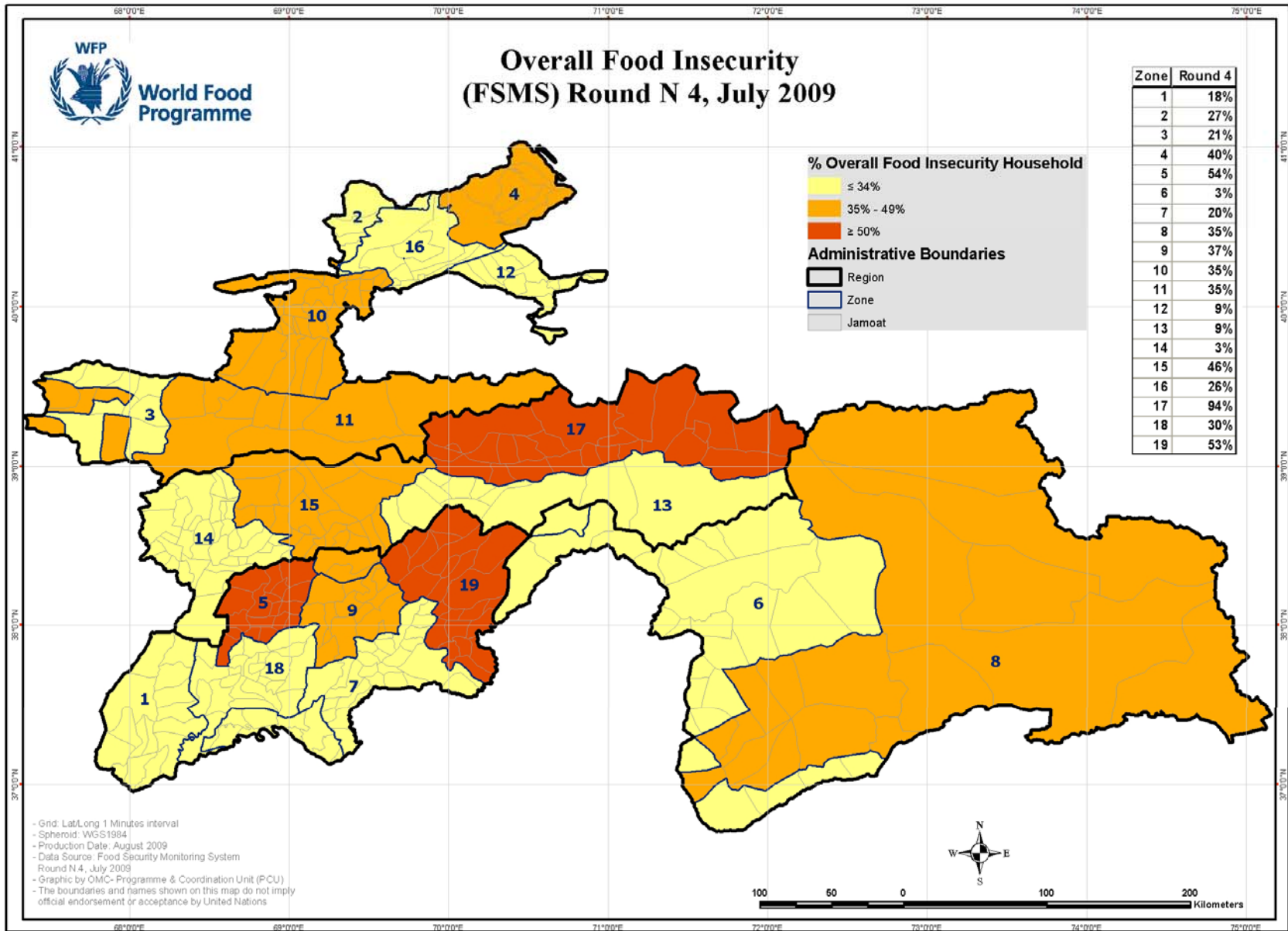
Facing these challenges, households try to cope as best they can without further losing any productive assets, as they did in May. Households have managed to temporarily reduce the number, frequency and intensity of coping strategies they normally employ. The Coping Strategy Index for the past three months has significantly decreased showing that households do not use as many coping strategies that damage their food intake as they did in May. For example, very few households skip meals for an entire day or reduce children's consumption. Two of the main coping strategies were to seek alternative employment (17% of the respondents) and increase the number of family members in migration (13%).

Figure 4 - Reduced coping strategy index



Trends and seasonal impact

Using data from the past year and from the Joint Emergency Food Security Assessment conducted in April 2008, the following seasonal calendar has been developed (see page 10) to better capture the probability of occurrence of important food security factors throughout the year. The goal is to better anticipate events and at the same time have a better understanding of the seasonal dynamics of food security and malnutrition. In general, the worst part of the year for most households is the beginning of the year in the heavy winter season. Summer months look like a better time for food security as more food is accessible; prices are lower and job opportunities more numerous.

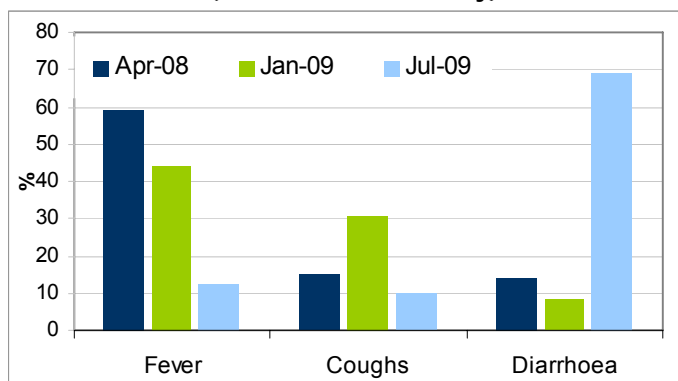


Jamoats selected: 1- Panj, 2- Avzikent, 3- Loiq Sherali, 4- Qirqquduq, 5- Hiloli, 6- Vanj, 7- Zarbdor, 8- Vankala, 9- Tabnochi, 10- Mujum, 11- Urmetan, 12- Khonaobod, 13- Yakhakyust, 14- Navobod, 15- Gumbuloq, 16- Utkansoy, 17- Alga, 18- Jilikul, 19- Balkhobi

Health status of children under 5 years

About 28% of children were sick prior to the assessment. Though almost 40% were reported to have been sick in January 2009, the type of disease was different in the current assessment. Whereas the main diseases in the winter months were fever and coughs, the survey in July reported almost 70% of diarrhoea (Figure 5). More than half of the sick children (57%) have been brought to the health center. The main reasons for not bringing the child to health services were non-severity of the disease and lack of money to take the child. The latter was mentioned by almost twice as many households since January.

Figure 5: Main diseases for children under 5 years of age (2 weeks before survey)



Nutritional status of children under 5 years

Amongst the 609 children measured, 10.3% [CI 6.9-14.8] were wasted¹ and 34.1% were stunted² [CI 27.5-41.5] (Table 1 and 2). These results are significantly higher than the rates observed in January 2009 (5.6% and 30.1% respectively).³ This upward trend has been observed since April 2008 when 4.7% wasting and 27.5% stunting was reported (Figure 6 and 7).⁴ Particularly in DRD and GBAO severe and moderate wasting increased significantly.

Wasting rates were particularly high in children under 24 months, which is likely to be associated with poor infant feeding practices. Another reason for the dramatic increase since January might be the high incidence of diarrhoea (70% of all children) due to poor water quality and sanitation practices. The weight loss in summer seems to be a seasonal pattern, which has been observed also in a recent longitudinal assessment.⁵

¹ Wasting: ration weight-for-height and the proportion of under 5 children with W/H < -2 z-scores

² Stunting: ration height-for-age and the proportion of under-5 children with H/A < -2 z-scores

³ Food security bulletin, January 2009

⁴ Emergency Food Security Assessment in Rural Areas of Tajikistan (EFSA), A Joint Food Security, Livelihoods, Agriculture and Nutrition Assessment, April/May 2008.

⁵ Optimized complementary feeding recommendations and in-home fortification in two regions of Tajikistan A pilot project for WHO and UNICEF, third interim report, National Research Institute for Food and Nutrition (INRAN), September 2008.

Table 1: Nutritional status of children under 5 (weight-for-height)

	Severely wasted (%) ^a	Moderately wasted (%) ^b	Overweight (%) ^c	Mean z-score
GBAO	5.6	11.1	16.6	0.05
DRD	8	4.8	4.0	-0.36
Khatlon	2.4	5.8	4.3	-0.18
Sugd	3.7	6.1	2.8	-0.29
Total	4.3	6.0	4.5	-0.25

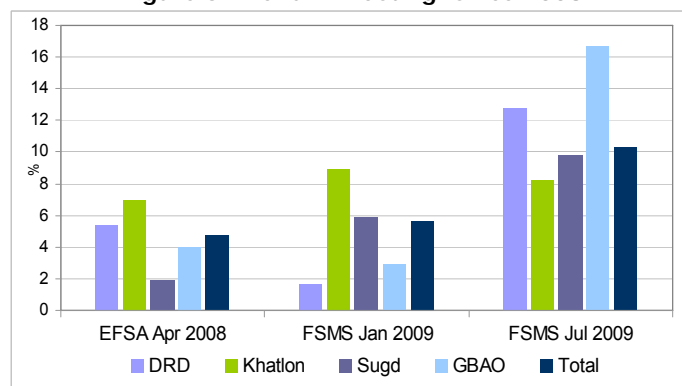
^az-score < -3; ^b z-score ≥ -3 and < -2; ^cz-score > 2

Table 2: Nutritional status of children under 5 (height-for-age)

	Severely stunted (%) ^a	Moderately stunted (%) ^b	Mean z-score
GBAO	25.0	22.2	-1.51
DRD	20.0	14.4	-1.63
Khatlon	12.6	24.2	-1.43
Sugd	12.7	16.4	-1.32
Total	15.0	19.1	-1.44

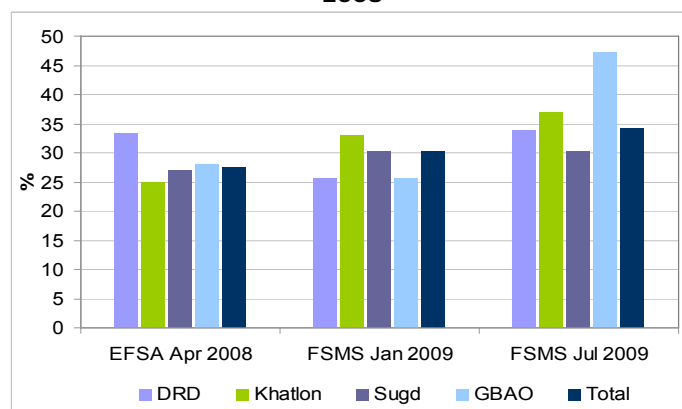
^az-score < -3; ^b z-score ≥ -3 and < -2

Figure 6: Trend in wasting¹ since 2008



Overall stunting rates show significantly higher levels than in April 2008 as well as January 2009 (Figure 6). Higher rates in moderate and severe stunting were particularly observed in Khatlon and Sughd.

Figure 7: Trend in stunting (moderate and severe)² since 2008



Infant feeding practices

Breastfeeding: Almost all children (93%) under six months of age received breast milk the day before the assessment. Exclusive breastfeeding rates in children under six months were however only 88%. Infants, who were not exclusively breastfed, received animal milk, plain or sugar water, tea, bread or potatoes. None of the children received infant formula.

Complementary feeding: At six months, only 58% of children received solid or semi-solid foods (Figure 8). The diet of children did not include any legumes, eggs or meat. After nine months, still only 71% of children were given semi-solid foods. Also in this age group, legumes, eggs and meat were given to very few children. Similar to other assessments on complementary feeding patterns⁶, the current data shows that complementary feeding is neither timely, nor adequate.

Dietary diversity in most children aged between 6 and 8 months was low (less than three food groups yesterday). In children between 9 and 11 months, only 44% showed middle or high dietary diversity (three or more food groups). In the age group between 12 and 23 months, 80% of children received three or more food groups the day before.

The dietary diversity was better in all age groups compared to January, which might be due to the increased availability of foods in summer months. Particularly in GBAO, where the availability of fresh fruits and vegetables in winter months is very limited, low dietary diversity decreased from 54% to 19% from January to July. However, around 20% of children did not receive meat or meat products, eggs or legumes the day before the assessment in July (Figure 9). The improved dietary diversity seems to be off-set by the increased rates of diarrhea, thus exacerbating wasting rates.

Figure 8: Breastfeeding and introduction of complementary foods

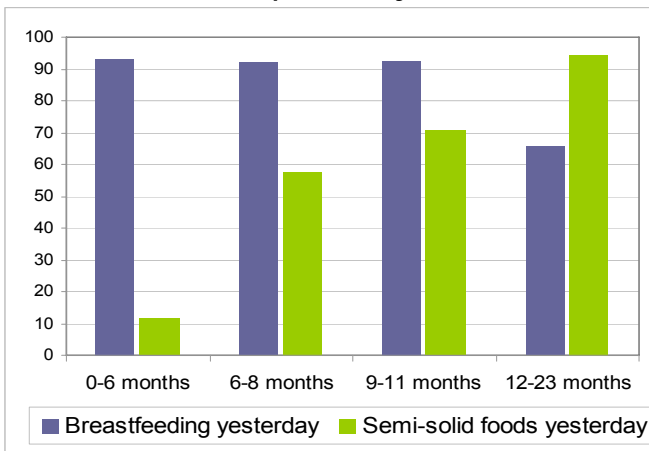
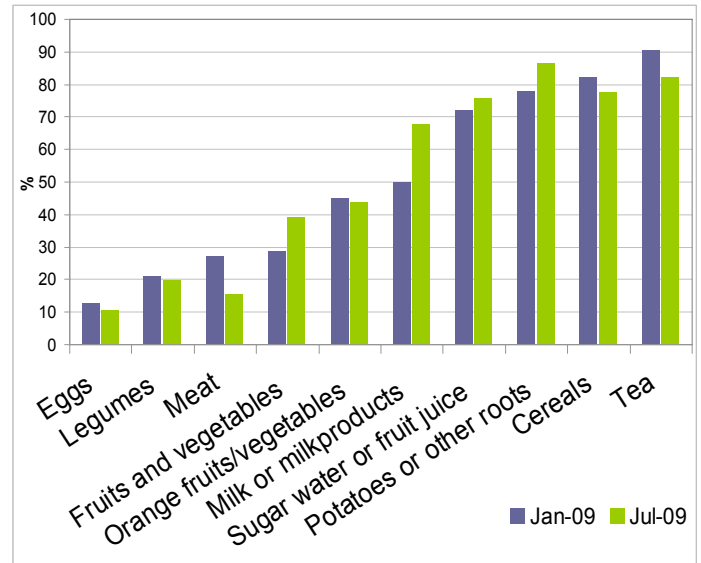


Figure 9: Percentage of consumers of different food groups



Responsive feeding

Responsive feeding patterns showed that the majority of caregivers interact responsively and developmentally appropriately with their children while they are eating; around 80% report talking or sitting with the child. One third of the caregivers however stated to do housework while the child is eating.

While most of the caregivers (73%) would encourage the child and try different foods if the child refuses certain foods, 30% reported to do nothing about it. Most children (73%) appear to be fed face to face by the caregiver, but this behavior is not associated with child height. The variable most associated with child height, whether the child was given the opportunity to self feed as well as being fed by the caregiver, was relatively infrequent (17%). Most caregivers continue to feed children 6-24 months giving the child no opportunity to explore their food (73%). On the other hand, 10% percent expect the child to feed him/herself completely.

⁶ D'Acapito P, *Consultancy activity to carry out a field test of linear programming for optimization of complementary feeding in Tajikistan, July-August 2005*. WHO/UNICEF-Report, 2006.

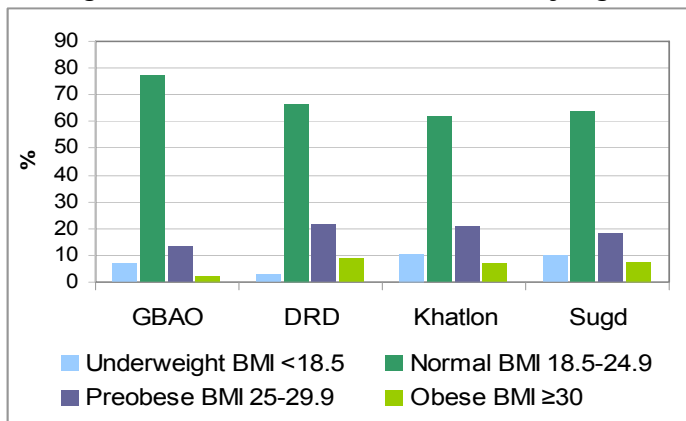
Nutritional status of women 19 - 49 years

Though comparison with previous surveys should be made with caution, a trend towards higher overweight and obesity rates was observed between 2003 and January 2009 (Table 3). However, from January to July 2009 the BMI reduced significantly in the assessed women (0.5 kg/m² on average). Overweight and obesity were particularly seen in DRD, Khatlon and Sughd, whereas underweight was high in Khatlon, Sughd and GBAO (Figure 10). This shows that over- and underweight are representing a double burden in those regions.

Table 3: Trend of nutritional status of women (%)

	MSST 2003 ⁷	NNS 2006 ⁸	FSMS Jan 09	FSMS Jul 09
Underweight BMI <18.5	8.6	11	6.3	8.38
Normal BMI 18.5-24.9	65.8	66	62.6	65.07
Pre-obese BMI 25-29.9	18.5	17	22.3	19.51
Obese BMI ≥ 30	7.1	6	8.9	7.05

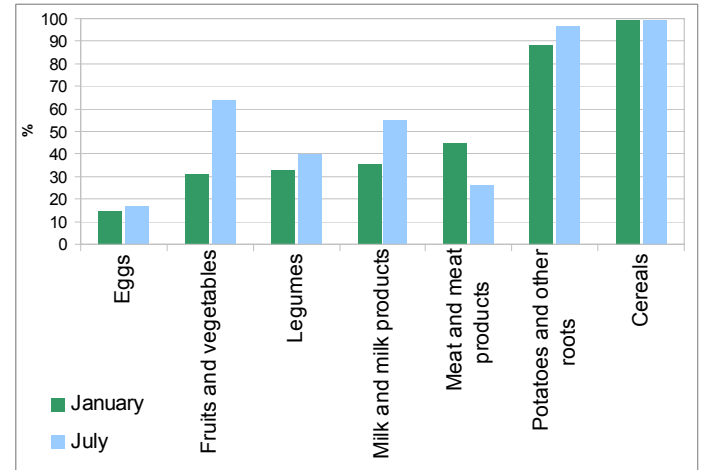
Figure 10: Nutritional status of women by region



Food consumption of women 19-49 years

Only around 20% of the women consumed five or more food groups out of eight the day before the assessment. With regards to the food groups, similar dietary patterns as in children could be observed (Figure 11). Less than half of women had consumed meat, fruits or vegetables, legumes or eggs the day before. However, the increased food availability in summer months appears to have an effect on the dietary intake of women. Compared to January, more women consumed fruits and vegetables, milk and milk products and potatoes.

Figure 11: Percentage of consumers of different food groups



Underlying causes of malnutrition in children

Preliminary analyses on possible underlying causes of malnutrition show that food consumption at both the household level and of mothers is related to the dietary intake of children.

The lack of diverse and sufficient food in the household seems to directly affect the nutritional status on the long term, since household food security as well as food stocks in the household showed correlations with stunting.

Though the quality of the water supply was not significantly correlated with nutritional outcomes, children with diarrhea were more likely to be wasted. Hand washing practices have not been assessed, but lack of hygiene might be a relevant factor.

An interesting link was seen between responsive feeding practices with children and nutritional status, particularly stunting appears to be lower in children that are fed developmentally appropriately.

The dietary intake of women also appeared to be linked with the food security situation in the household. Women in food secure households were more likely to have a higher dietary diversity. The effect on the nutritional outcome in women seems however not as dramatic as in children, which underlines the vulnerability of children.

Dietary diversity is not only linked to the seasonal availability of foods, but also to the households' economic access. The increase of poor and average food access since round three could have further negative effects on nutritional outcomes.

⁷ Micronutrient Status Survey in Tajikistan (MSST), 2003

⁸ A Study of the Nutritional Status of Children aged 6 – 59 months, and reproductive Women in Tajikistan, 2006.

Seasonal calendar of food security and nutrition indicators

		J	F	M	A	M	J	J	A	S	O	N	D	
Nutrition	Acute malnutrition in children	Low/normal					High							
	Dietary diversity of children	Low					High							
Migration	Labour migration of the village	Low		High							Low			
	Reception of remittances	Low								High			Low	
Income	Income opportunities						High					Low		
	Family income	Low												
Credit/debts	Debts	High								Low				
	Credit for health expenses	High										High		
Expenditures	Expenditures on food	High					Low			High				
	Expenditures on education									High				
	Expenditures on health	High			Low		High		Low		High			
Food source	Central Market	High								High				
	Local market						High							
	Own production						High							
Shocks	High human diseases	High							High					
	Food prices	High								Low		High		
	Reduced drinking water	High							High			High		
	Lack of agricultural water						High							
	High Livestock diseases	Low			High									
Stocks	Coping strategies (CSI)	High			Low			Low			High		High	
	% Housheolds own stock	Low					Low		High					
	Wheat (duration of stock)					Low					High			
	Potatoes					Low					High			
	Fruits/vegetables	Low								High		Low		

The seasonal calendar is based on results from the four rounds of FSMS and 100 focus groups from the Joint Emergency Food Security Assessment (April 2008). In red are the periods when an increase or a decrease of the indicator has a potentially negative impact on the food security and nutrition status of the households. In white are the periods when the indicators are average or for which data is not available. In green are the periods during which the impact on food security and nutrition is deemed to be positive. There are no clear thresholds and the colors are based on participants' perception and on overall findings of the FSMS and other food security assessments undertaken in Tajikistan since April 2008.

Possible scenarios...

For the next three months, the food security situation of many households will be dependent on several factors:

- **Nutrition:** as high rates of wasting during summer months have been observed previously in Tajikistan and seem to be seasonal, a reduction to levels observed in winter months could be expected. However, despite the higher availability of foods during summer, dietary diversity was still not optimal. It is to be expected that the micronutrient status of the children has deteriorated with the weight loss and lack of dietary diversity.
- **Food consumption:** at household level, fats and oils are consumed more regularly than micronutrient rich foods such as eggs, meat and beans. The increasing food prices, particularly of oil and the decreasing food access of households, might cause further deterioration of dietary diversity and following poor nutritional status (particularly chronic malnutrition).
- **Remittances and migration:** already reported in the last bulletins, remittances have continued to decrease and to contribute less and less to household's income. Migrants are coming back slowly, however in some regions migration has not stopped but on the contrary, has increased as a coping strategy. Migration should continue to increase slightly in the coming months but remittances should stabilize at a lower level compared to the record transfers of last year.
- **Employment:** as the financial crisis stabilizes, and the number of households reporting loss of income stagnates, households severely affected three months ago by the crisis have already found new sources of income: animal husbandry, daily wage labor and, for the most vulnerable, begging and borrowing. Their revenue has dropped compared to last year especially as daily wages continue to decrease in certain areas. Employment opportunities are at their highest with the harvest but it is not envisioned that employment will drastically improve in the coming months despite some investments (mainly in urban parts of the country).
- **Expenditures:** Households' expenditures have already shown some changes mainly due to seasonal changes but also to the economic and high food price crisis. In the coming months, expenditures on education will increase due to the start of the school year (as shown in October last year). Expenditures on health should remain high as well. Although for the moment food prices have not increased due to Ramadan, households will have to face more expenditure towards the end of the Holy month. This combined increase of expenditures will affect the most vulnerable households.
- **Government's spending:** pensions and government salaries are now playing a central role in the total income of rural households. Delays and difficulties in receiving pensions have been noticed by key informants and key informants and will have a severe effect on households' ability to afford the basic food basket.

- **Food prices:** Prices have not decreased as much as they normally do during the harvest season maybe due to Ramadan (see price trends in annex 1). Households still report the high food prices as the main shock this round. But the cost of the food basket has slightly decreased (TJS 85 per person per month compared to TJS 92 in May) and might remain at similar level until the end of the harvest and go back up closer to the end of the autumn.

... and recommendations

There is an urgent need for a strategic approach to address nutrition and food security in an integrated way. Relevant actors should advocate for integrated strategies on the governmental level.

Addressing the immediate causes: health promotion campaigns addressing the individual and the whole community should address exclusive breastfeeding promotion, optimization of complementary feeding, good hygiene practices and optimization of micronutrient intake.

Addressing underlying causes:

- **Increasing food availability and access:** Food insecure households identified in the previous round are being assisted through food aid and agricultural programmes, but new vulnerable zones have come to light and particular attention should be given to the Rasht Valley and Murghab. The improvement of the situation in Khatlon and Sughd is only temporary.
- **Improving water quality:** As already indicated in previous monitoring rounds, government and partners should make water access (both for irrigation and human consumption) the main priority of the next months. Drastic and better coordinated responses are critical;
- **Disaster risk reduction:** The effects and damages of the heavy rains in spring are impacting the food security situation of pockets of households in the most affected areas (Jirgatal, Khuroson, Asht) and have confirmed the importance of working on disaster risk reduction but also point towards immediate assistance and funding for recovery activities. The recent early recovery appeal is most adapted to respond to the mudflow and flooding in affected areas. As mentioned in the previous bulletin, the government and partners should continue to work together on disaster risk reduction projects. Tree plantation projects are more than ever relevant.
- **Creating new employment opportunities:** There is a need to continue work on reforms at the macro level and on providing social safety nets while working on improving the business environment. Efforts should be put on reducing costs of establishing small and medium size businesses and free trade zones could be a solution among others.
- **Women empowerment:** As more women are involved in income-generating activities there is a need for stronger focus on involvement of women in the current reforms and anti-crisis plan.