

Context Analysis of Nutrition (CAN) in Tajikistan

Recommendations for a Nutrition Strategy

Commissioned by
Welthungerhilfe
01. February – 15. March 2020

In completion of Consultancy Contract No. 468872/112645

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March 2020

Executive Summary

In February 2020, Welthungerhilfe commissioned a Context Analysis of Nutrition (CAN) in Tajikistan in order to gain better understanding of the multi-dimensional¹ and multi-sectoral context of nutrition, including information on the current nutrition situation, potential causal pathways of hunger and malnutrition, stakeholders working in the field of nutrition in the country, as well as traditional and cultural challenges. The first part of this report describes the findings of the CAN based on information deriving from secondary data through literature review and primary data through focus group discussions and key informant interviews. The second part of the report focusses on strategic recommendations on nutrition interventions and on opportunities for Welthungerhilfe and its partner organisations to engage in advocacy.

Data presented in this report is mainly based on four national surveys related to nutrition: Demographic Health Survey (DHS) from 2012, DHS from 2017, Micronutrient Status Survey from 2009 and National Nutrition Survey from 2016. This information was mainly supplemented by a national WASH survey conducted by the World Bank in 2016 and formative research on infant and young child feeding in Tajikistan conducted in 2016 by UNICEF.

The results of these surveys show that despite improvements over the last decade, undernutrition remains a significant public health problem in Tajikistan and although stunting and wasting rates have declined between 2009 and 2017, in particular stunting is still very high with 17.5% at a national level.

When disaggregated into age groups, results show that the youngest population group has the highest prevalence of wasting, more than 15% of the babies 0-2 months of age were wasted, while stunting accumulates over the years and was highest for children at around 2 years of age. This observation suggests, that in order to reduce the prevalence of wasting focus should be given to the youngest age group (infants below 6 months of age), involving interventions aiming at appropriate breastfeeding and ensuring diversified food consumption by mothers and adolescent girls (getting ready for pregnancy). However, in order to reduce the prevalence of stunting, which is highest for children at around 2 years of age, attention should be given to appropriate complementary feeding practices and hygiene.

These observations are confirmed by the infant and young child feeding practices reported in the DHS 2017. Data show, that although 98% of mothers do breastfeed their baby at some point, only 36% of children were exclusively breastfed (but not necessarily for 6 months) and only 15% of the children were exclusively breastfed when they reached the age of 4-5 months. The results of the DHS also suggest that complementary food children receive during the weaning is not appropriate. Only 9% of the children below 2 years of age receive a minimum acceptable diet according to WHO classification, mainly due to a lack of diversity and late introduction of weaning. These two aspects seem to be partly responsible for the high prevalence of stunting in this population group as micronutrients are introduced late to a child's diet. Furthermore, children receive black tea from very early age which hampers iron absorption and thus reduces the availability of iron even further.

In general, the Tajik diet is too high in energy (wheat and oil) and too low in nutritious food, it predominantly exists of "empty-calories". In order to receive nutritious food, some of these items must be replaced by more nutrient-dense foods such as vegetables, fruits, dairy and other animal source foods. However, cost of the diet (CotD) modelling done by WFP in 2018 showed that the nutritious diet costs 2.5-3.5 times more than a diet that meets only energy

¹ "Multi-dimensional" refers to food availability, access to food, utilisation and stability (FAO)

requirements and is therefore not affordable by 29-56% of households. It could be observed, that households who reported seasonal food scarcity have a trend towards poorer dietary diversity.

This, together with other underlying factors result in micronutrient deficiencies such as anaemia, iodine deficiency and vitamin A deficiency. Results of the DHS 2017 showed that 41% of women in child-bearing age and 42% of children between 6 and 59 months of age were reported to be anaemic. Approximately 50% of these cases are linked to iron deficiency. When disaggregating the 2017 data into age groups results show that in particular children between 12 and 17 months of age suffer most of anaemia with a prevalence of 66%. This indicates, that the weaning period plays an important role in the fight against anaemia.

Iodine deficiency and vitamin A deficiency are also very high. During the National Nutrition Survey in 2016 the prevalence of iodine deficiency was assessed as 51% in children between 6 and 59 months of age and 62% in mothers between 15 and 49 years of age (unweighted). The prevalence of vitamin A was assessed as 37% in children and 47% in mothers. This presents a serious public health problem.

These micronutrient deficiencies and the high prevalence of stunting as described above do not only reflect poor nutritional intake but are partly also caused by infections and diarrhoea. Especially the latter plays an important role in the nutritional status of children. The prevalence of diarrhoea is highest for children between 6 and 24 months of age with more than 21% of children in this age group suffering from diarrhoea during the two-weeks period before the interview took place. One main cause for diarrhoeal diseases is unsafe drinking water. Although, Tajikistan has made substantial progress in reducing the proportion of people without safe drinking water supply, still 15% of the population rely on surface water as their main source of drinking water.

Therefore, in order to improve the nutritional status of the target population in Tajikistan it is recommended that Welthungerhilfe engages in both, nutrition-specific and nutrition-sensitive activities. In regard to nutrition-specific interventions, it is recommended that Welthungerhilfe focusses on soft approaches such as behaviour change communication and advise for breastfeeding, weaning and food diversification. In regard to nutrition-sensitive interventions activities should be spread over the various sectors influencing household nutrition security ranging from safe drinking water supply, through education to diversification of available food.

Recommended nutrition-specific activities:

- Review/development of behaviour change communication strategy.
- Promotion of appropriate breastfeeding (training of PHC providers, information through printed material and mass media campaigns).
- Promotion of appropriate complementary feeding (identifying and training CNVs, information through printed material and mass media campaigns).
- Promotion of improved hygiene practices including hand washing (training of CNVs in BCC, information through printed material and mass media campaigns).
- Awareness raising for the importance of relevant micronutrient supplements amongst (a) local population and (b) organisations who provide supplements including the Tajik Government (training to PHC providers and CNVs, coordination with international organisations/government on provision of supplements).
- Awareness raising for the importance of fortified food and information on appropriate storage (information through printed material and mass media campaign).

- Promotion of dietary diversification (train CNVs, support them in activities such as cooking demonstrations and mentoring of vulnerable households, information through printed material and mass media campaigns).
- Strengthening the health sector (PHC System and Healthy Lifestyle Centres) by providing training to their staff and volunteers, providing and/or advocating for information material and equipment, and using these structures where available.

Recommended nutrition-sensitive activities:

- Improving food diversity at household level by improved production and marketing of nutritious foods through the promotion of homestead food production, green houses, fruit growing, small animal breeding, fish farming, local production of specialist food, new technologies in agriculture (new varieties, new cultivation techniques) and physical and/or economic access to markets.
- Improving the availability of nutritious food all year round by promoting improved food preservation techniques and improved food storage.
- Reducing women's workload by improving access to safe drinking water and solar energy (less firewood needs to be collected).
- Sensitising men regarding the importance of breastfeeding and appropriate weaning and women's time and energy required for this.
- Provide staff training in nutrition (Welthungerhilfe and implementing partners)
- Promote nutrition education as part of labour classes at school
- Promote improved hygiene practices such as appropriate hand washing

Many surveys have been carried out in Tajikistan and much has been learned. However, several aspects and causes for the high prevalence of stunting and micronutrient deficiencies have still not been fully understood and further research is needed. In order to strengthen Welthungerhilfe's impact on improving nutrition in Tajikistan it is recommended that Welthungerhilfe engages in nutrition research by cooperating with academia in implementing small studies and/or supporting other partners in the country who carry out quantitative or qualitative assessments. This might include one-off surveys to understand underlying causes of compromised nutrition as well as surveillance systems to measure and understand seasonality and longer-term trends.

Interventions should be focused on the following beneficiary groups:

For nutrition-specific interventions:

- women of childbearing age (in particular pregnant and lactating women),
- adolescent girls,
- children in their first 1,000 days of life and
- some activities should also involve women's mothers in law and husbands

For nutrition-sensitive activities:

- able farmers (male and female) with some land and basic resources

For welfare:

- most vulnerable households who do not have any land or homestead garden and thus depend on gifts, donations and public welfare support programmes

For training (secondary beneficiaries):

- individuals and institutions who function as implementing partners (PHC providers, in particular nurses and midwives, community-based organisations and their thematic subgroups, CNVs, HLC and their volunteers, and schoolteachers.

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Abbreviations

ACTED	Agency for Technical Cooperation and Development
AKF	Aga Khan Foundation
AKHS	Aga Khan Health Services
BMI	Body Mass Index
BMZ	German Ministry of Economic Cooperation and Development
CAN	Context Analysis of Nutrition
CBO	Community Based Organisation
CHV	Community Health Volunteers
CNV	Community Nutrition Volunteers
CRF	Common Results Framework
DALYs	Disability Adjusted Life Years
DCC	Development Coordination Council
DHS	Demographic and Health Survey
DRS	Districts of Republican Subordination
EU	European Union
FGD	Focus Group Discussion
FM	Family Medicine
GBAO	Gorno Badakhshan Autonomous Oblast
GDP	Gross Domestic Product
GoT	Government of Tajikistan
IFC	International Finance Cooperation
IYCF	Infant and Young Child Feeding
KII	Key Informant Interview
LANN+	Linking Agriculture and NRM towards Nutrition Security
LBW	Low Birth Weight
MAD	Minimum Acceptable Diet
MCH	Mother and Child Health
MDD	Minimum Dietary Diversity
MMF	Minimum Meal Frequency
MoHSPP	Ministry of Health and Social Protection of the Population
MSCC	Multi-Sectoral Coordination Council (SUN movement)
MSDSP	Mountain Societies Development Support Programme
NaPAS	Nutrition and Physical Activity Strategy
NGO	Non-Governmental Organisation
NNS	National Nutrition Survey
NRM	National Resource Management
PHC	Primary Health Care
PtIN	Programming towards Improved Nutrition
RCFM	Republican Centre of Family Medicine
RCHL	Republican Centre of Healthy Lifestyle
SCN	Standing Committee on Nutrition
SDG	Sustainable Development Goal
SUN	Scaling Up Nutrition
TA	Technical Assistance
ToT	Training of Trainers
UN	United Nations
UNICEF	United Nations Children's Fund
VO	Village Organisation
WB	World Bank
WFP	World Food Programme

1 Introduction

1.1 Background

Welthungerhilfe's global strategy to overcome hunger and malnutrition (2017-2020) is based on a multi-sectoral approach guided by the initiative "Programming towards Improved Nutrition (PtIN)". With this approach Welthungerhilfe aims to achieve effective and sustainable improvements in nutrition especially amongst the most vulnerable groups of the population. PtIN is a strategic approach aiming at aligning sectors and applying a nutrition lens to programme design.

In order to allow the Welthungerhilfe country team in Tajikistan to better plan a nutrition strategy linked to this multi-sectoral approach it is crucial to gain in-depth understanding of the multi-dimensional and multi-sectoral context of nutrition, including information on the current nutrition situation, causal pathways of hunger and malnutrition, stakeholders working in the field of nutrition in the country, as well as traditional and cultural challenges. This need of information forms the basis of a Context Analyses of Nutrition (CAN).

1.2 Objectives of the Assignment

The overall objective of this assignment is to undertake a Context Analysis of Nutrition in Tajikistan and based on the findings of this analysis develop a nutrition programming strategy in line with Welthungerhilfe's global mandate and current policies and strategies in Tajikistan.

In this strategy report, recommendations will be given (a) on nutrition interventions and on opportunities for Welthungerhilfe to engage in advocacy at national level (Government and Donor organisations); and (b) on role of partner organisations in programme implementation and on advocacy at regional and communal level.

1.3 Methodology

The Context Analysis of Nutrition is based on information that derived from two input sources: secondary data through the review of literature (national surveys and reports), and primary data through Focus Group Discussions (FGD) and Key Informant Interviews (KII). Due to time restraints no structured household interviews were conducted. A list of surveys and reports used during the analysis is presented in Annex 1, and a list of all Key Informants is presented in Annex 2.

The information collected focused on the following key questions:

- WHAT:** What is the nutrition situation in the country?
- WHERE:** Where is the most affected area?
- WHO:** Which population groups are most affected by malnutrition (gender, age)?
- WHEN:** When is the target population most affected? Seasonality?
- WHY:** Which are the underlying causes for the nutritional situation?

Further, information was collected on:

- (a) Stakeholders engaged in nutrition, what activities are currently implemented by who and where; and the
- (b) Policy framework and Government's involvement in nutrition.

2 Contextual Analysis of Nutrition (CAN)

2.1 Country Background

Tajikistan is a post-conflict, land-locked country with a population of over nine million people, three quarters of whom live in rural areas. It is characterized by a mountainous landscape that limits arable land to just seven percent of its surface.

Over the past decade, Tajikistan has made steady progress in reducing poverty and growing its economy. Between 2000 and 2017, the poverty rate fell from 83% to 29.5% of the population, while the economy grew at an average rate of 7% per year. However, the rate of job creation has not kept pace with the growing population, leaving the economy vulnerable to external shocks. Tajikistan remains the poorest country among the Commonwealth of Independent States and ranks 71st out of 162 countries in progress towards meeting the Sustainable Development Goals (SDGs)². The under-five mortality rate is 33 death per 1,000 live births indicating that 1 in 30 children die before reaching their fifth birthday³.

Remittances from labour migration are an important component to Tajikistan's economy, accounting for approximately 36.6% of its Gross Domestic Product (GDP) according to World Bank estimates (2017). From 2014 to 2016, the fall in global oil prices and the economic downturn in Russia negatively affected the economy of Tajikistan and resulted in a drastic reduction of remittances. While in 2012 remittances accounted for 42% of GDP in 2016 this figure dropped to 27%. In 2017 remittances picked up again and reached 36.6% of GDP.

Tajikistan's high vulnerability to climate change and natural disasters represents an additional challenge to successful economic management. Between 1992 and 2016, natural and climate-related disasters led to GDP losses of roughly US\$1.8 billion, affecting almost 7 million people.

2.2 Country Situation on Nutrition

Four main national surveys related to nutrition were implemented over the last decade: Two Demographic Health Surveys (DHS) conducted by the Statistical Agency under the President of the Republic of Tajikistan and the Ministry of Health and Social Protection of Population (MoHSPP) in cooperation with the DHS Programme of the IFC in 2012 and 2017; and two National Nutrition Surveys (NNS) conducted by the MoHSPP in cooperation with UNICEF and the World Bank, with financial contribution from the Japan Scaling up Nutrition Trust Fund and technical support from the Swiss Tropical and Public Health Institute (Micronutrient Status Survey in Tajikistan 2009 and National Nutrition Survey in Tajikistan 2016). Parallel to the NNS 2016 a national WASH survey was conducted by the World Bank^{4,5} and a formative research on infant and young child feeding in Tajikistan⁶ was conducted by UNICEF.

² Sachs, J., Schmidt-Traub, G., Kroll, C., Lafortune, G., Fuller, G. (2019): Sustainable Development Report 2019. New York: Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN)

³ Statistical Agency under the President of the Republic of Tajikistan, Ministry of Health and Social Protection of Population of the Republic of Tajikistan, and ICF International (2018): Tajikistan Demographic and Health Survey 2017. Dushanbe, Tajikistan

⁴ Lavado R, Seitz W and Thiebaud A: Childhood Stunting in Tajikistan: Quantifying the Association with WASH Food Security, Health and Care Practices, World Bank November 2017

⁵ World Bank 2017. Glass Half Full: Poverty Diagnostic of Water Supply, Sanitation and Hygiene Conditions in Tajikistan.

⁶ Klassen A, Drexel University and UNICEF. Formative Research on Infant and Young Child Feeding and Maternal Nutrition in Tajikistan; 2016

Summary of selected key nutrition indicators:

	NNS 2009	DHS 2012	NNS 2016	DHS 2017
Prevalence of Wasting (children <5 years) ⁷ [%]	4.5	9.9	2.8	5.6
Prevalence of Stunting (children <5 years) ³ [%]	28.9	26.2	20.9	17.5
Prevalence of under-weight (children <5 y) ³ [%]	8.4	12.1	6.2	7.6
Prevalence of over-weight (children <5 y) ³ [%]		5.9	4.1	3.3
Percentage of women (15-49 y) with low BMI (<18.5) [%]	6.7	10.6	8.0	7.4
Percentage of women (15-49 years) with BMI above 25 [%]	28.2	29.7	37.5	37.1
Percentage of children exclusively breastfed at 4-5 months ⁸ [%]	64.8	20.6	62.9	14.8
Prevalence of Anaemia in children (6-59 m) [%]	30.8		25.8	41.5
Prevalence of Anaemia in mothers (15-49 y) [%]	24.3		25.8	41.1
Prevalence of households using iodised salt ⁹ [%]	61.9	84.1	78.0	91.7
Under-five mortality rate (5 years prior survey) [‰]		43.0		33.0
Neonatal mortality rate (5 years prior survey) [‰]		19.0		13.0
Percentage of women (15-19 y) who have begun childbearing [%]		7.4		6.8
Prevalence of birth intervals <24 months [%]		33.1		35.9
Prevalence of diarrhoea (<5 years) ¹⁰ [%]	37.2	15.1	12.1	13.2
% of children having diarrhoea treated with Zinc				19.7
% of population with access to an improved source of drinking water ¹¹		76.2		77.9
% of population with access to improved sanitation ¹²		94.2		97.0

⁷ The anthropometric measurements presented in DHS (2012 and 2017) refer to all children below 5 years of age including children below 6 months of age while the measurements presented in NNS (2009 and 2016) only refer to children between 6 and 59 months of age. This might partly explain the difference in the prevalence of wasting as in DHS children below 6 months of age showed the highest prevalence of wasting when disaggregated into age groups.

⁸ Data from DHS (2012 and 2017) is solely based on the number of mothers who breastfeed at the moment of the interview while data from NNS (2009 and 2016) is based on historical self-reporting from all mothers also including mothers who have stopped breastfeeding already. Therefore, exclusive breastfeeding in the NNS most likely also includes mothers who have provided water in addition to breastmilk.

⁹ During DHS (2012 and 2017) it was only tested whether the salt was iodised while in NNS (2009 and 2016) it was tested whether the salt was sufficiently iodised (≥ 15 ppm)

¹⁰ Numbers from NNS 2009 are based on the prevalence of diarrhoea during the last 4 weeks before the interview while the figures of the other surveys are based on the last 2 weeks before the interview.

¹¹ Improved source of drinking water: piped into dwelling/yard/plot, piped to neighbour, public tap/standpipe, tube well or borehole, protected dug well, protected spring, rainwater, bottled water

¹² Improved sanitation: flush to piped sewer system, flush to septic tank, flush to pit latrine, ventilated improved pit latrine, pit latrine with slab, composting toilet

2.2.1 Children’s Anthropometry

Despite improvements over the last decade, undernutrition remains a significant public health problem in Tajikistan. Although stunting and wasting rates have declined between 2009 and 2017, stunting is still very high.

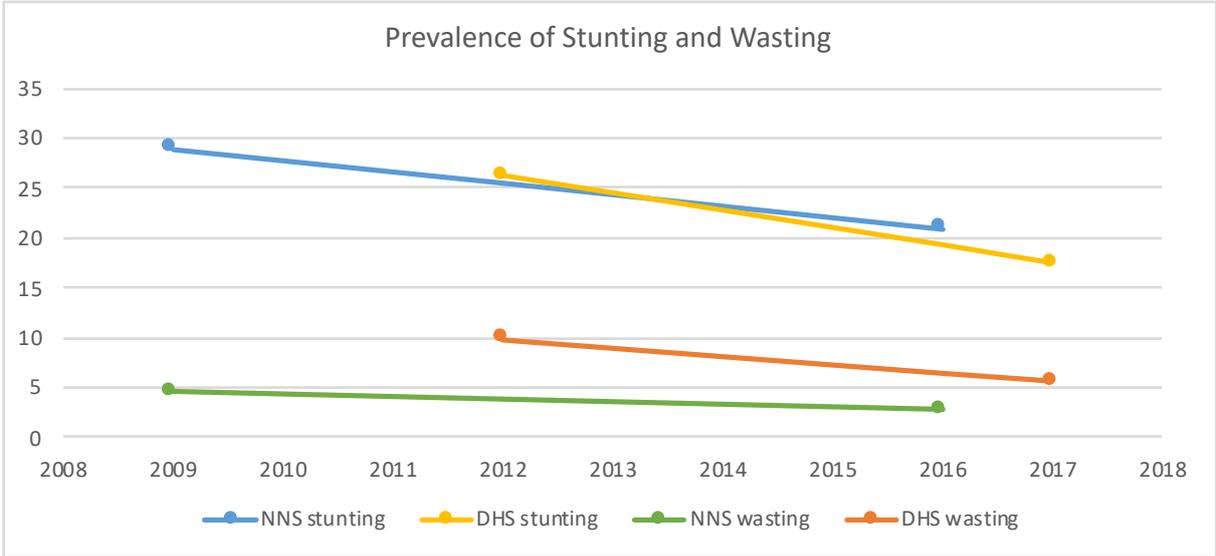


Fig 1: Prevalence of stunting and wasting across 8 years as reported in the National Nutrition Surveys (NNS 2009 and NNS 2016) and the Demographic Health Surveys (DHS 2012 and DHS 2017)

The difference between the two surveys, the DHS and the NNS, especially in relation to the prevalence of wasting, can partly be explained by a difference in the survey population. While in the NNS children between 6 and 59 months of age were assessed, the DHS also included children below 6 months of age. As this is a very vulnerable population group which shows the highest prevalence of wasting when disaggregating the survey population into age groups, the inclusion of this group into the DHS shifted and thus increased the prevalence of wasting.

Fig 2 shows the prevalence of stunting and wasting in DHS 2017 by age group. This figure shows, that the youngest population group has the highest prevalence of wasting. More than 15% of the babies 0-2 months of age show wasting while only 8% were reported to have been born with a low birth weight (less than 2.5 kg). This implies that the higher prevalence of wasting might be linked to suboptimal feeding and caring practices for infants. In contrast, the prevalence of stunting accumulates over the years and children at around two years of age show the highest prevalence. This observation equates to the commonly observed pattern that almost all stunting takes place in the first 1,000 days after conception

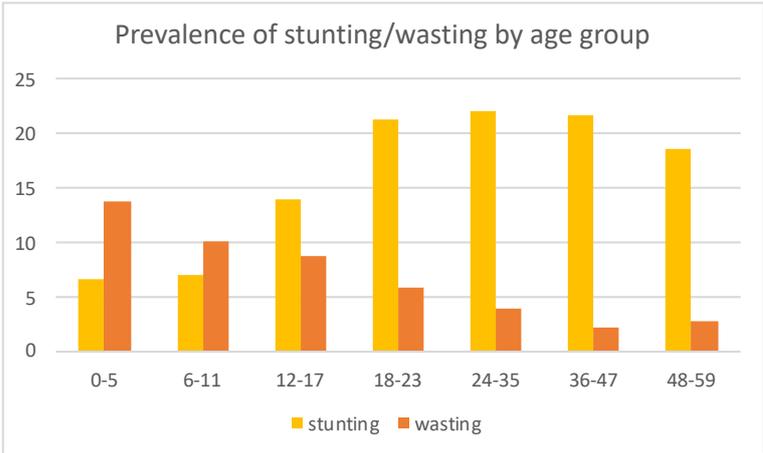


Fig 2: Prevalence of stunting and wasting by age group, DHS 2017

and there is strong evidence that the promotion of appropriate complementary feeding practices can reduce the incidence of stunting¹³.

Results on stunting and wasting vary widely between the regions. Wasting was reported highest in Dushanbe followed by GBAO (Gorno Badakhshan Autonomous Oblast). Both regions showed an increase in the prevalence of wasting over the last 5 years while the other regions and the national average experienced a decline.

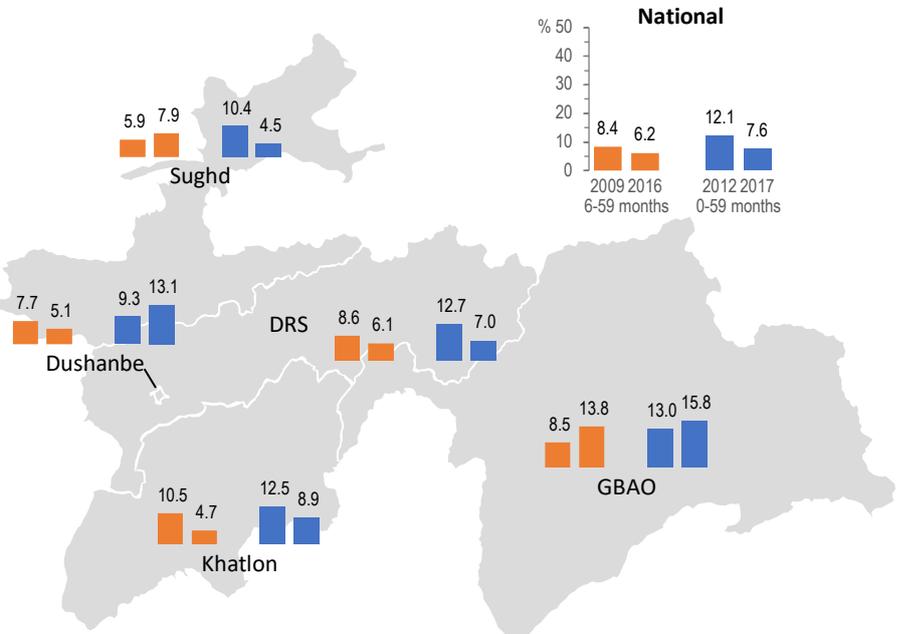


Fig 3: Prevalence of wasting by region

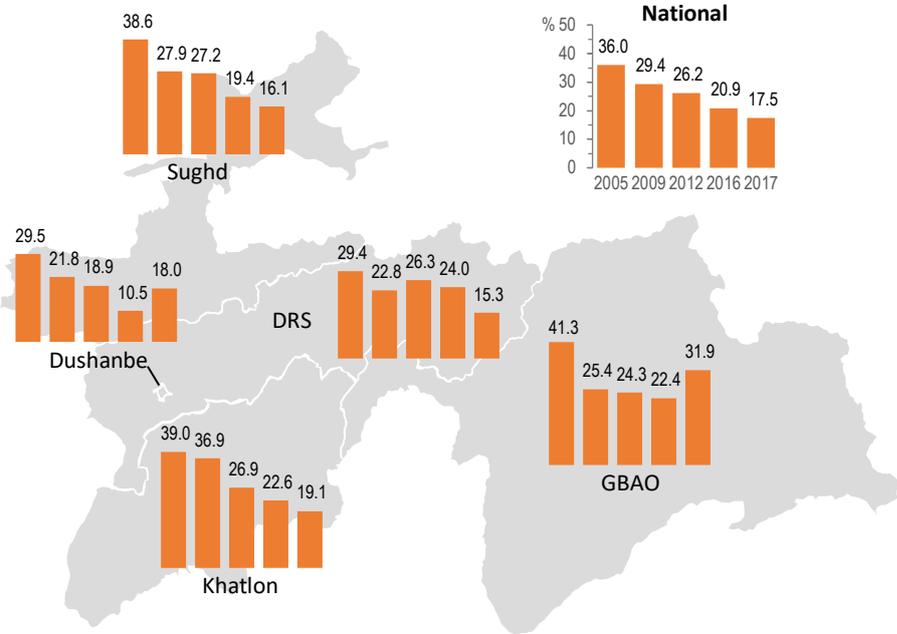


Fig 4: Prevalence of stunting by region

¹³ Bhutta ZA, Das JK, Rizvi A, Gaffey MF, Walker N, Horton S, Webb P, Lartey A, Black RE, et al, The Lancet Nutrition Interventions Review Group and the Maternal and Child Nutrition Study Group. Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost? Lancet 2013; 382:452-77

The prevalence of stunting was reported to be highest in GBAO followed by Khatlon. In all regions, except for Dushanbe and GBAO, stunting declined between 2012 and 2017 when comparing the results of the two Demographic Health Surveys (DHS). However, the current rate of decline is likely not enough to meet Tajikistan’s stunting target for the Sustainable Development Goal 2 by 2030.

2.2.2 Women’s BMI

Alongside these figures of high level of stunting the prevalence of overweight and obesity is also high and is increasing year by year, especially in urban areas where it is leading to a double burden of malnutrition. Overall, 7% of women between 15 and 49 years of age show a BMI <18.5 and are thus considered to be underweight, 24% are overweight (BMI between 25 and 29.9) and 13% obese (BMI >= 30). The national prevalence of overweight and obesity increased steadily from 28.2% in 2009, to 29.7% in 2012, to 37.5% in 2016 and to 37.1% in 2017. The lowest prevalence of overweight and obesity was detected in GBAO followed by Khatlon. All other regions are similarly high. This, together with the high prevalence of stunting and various micronutrient deficiencies, indicates that the nutritional quality of the diet is inadequate.

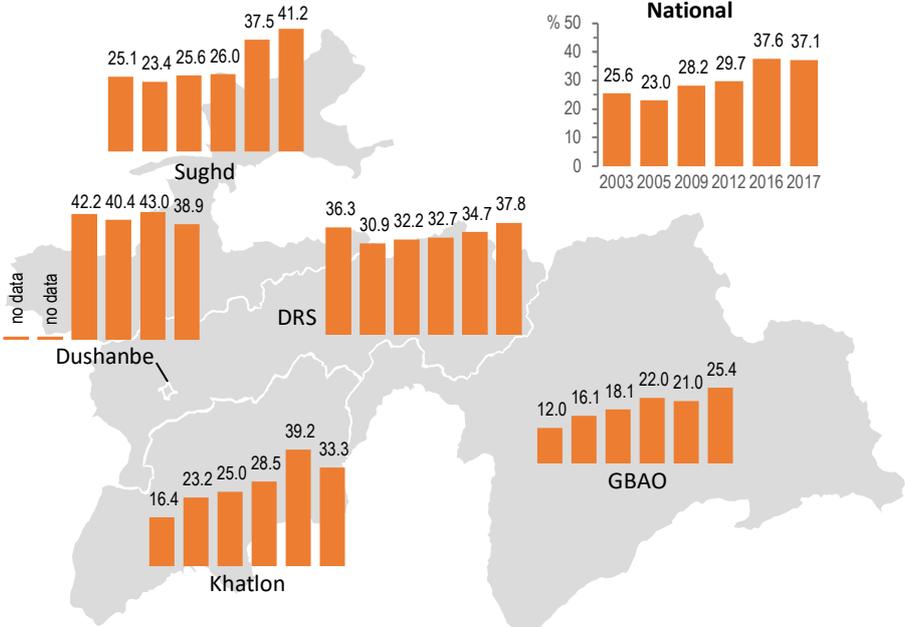


Fig 5: Prevalence of overweight and obesity in women 15-49 years

2.2.3 Breastfeeding

Appropriate infant and young child feeding (IYCF) practices include early initiation of breastfeeding (within the first hour of life) and exclusive breastfeeding (that is, no other liquid, water, or solid food) for the first six months of the infant’s life. Breastfeeding is a safe and sterile source of nutrition, providing the most wholesome and beneficial composition of nutrients that promote infant growth. Also, breastmilk contains important antibodies that promote immunity and protect the infant from common childhood illnesses (i.e. diarrhoea and pneumonia). Data from the DHS 2017 show that breastfeeding practices were universal among Tajik mothers. 98% of children (born in the two years before the survey) were reported to be breastfed at some point, 94% of children were breastfed within one day and 62% within one hour of birth. 11% of children received prelacteal feeding. The proportion of children breastfed within one hour of birth increased from 50% in 2012 to 62% in 2017 while

the proportion of children ever breastfed and breastfed within one day of birth remained relatively stable over the same period. Prolactal feeding decreased slightly from 14% to 11%.

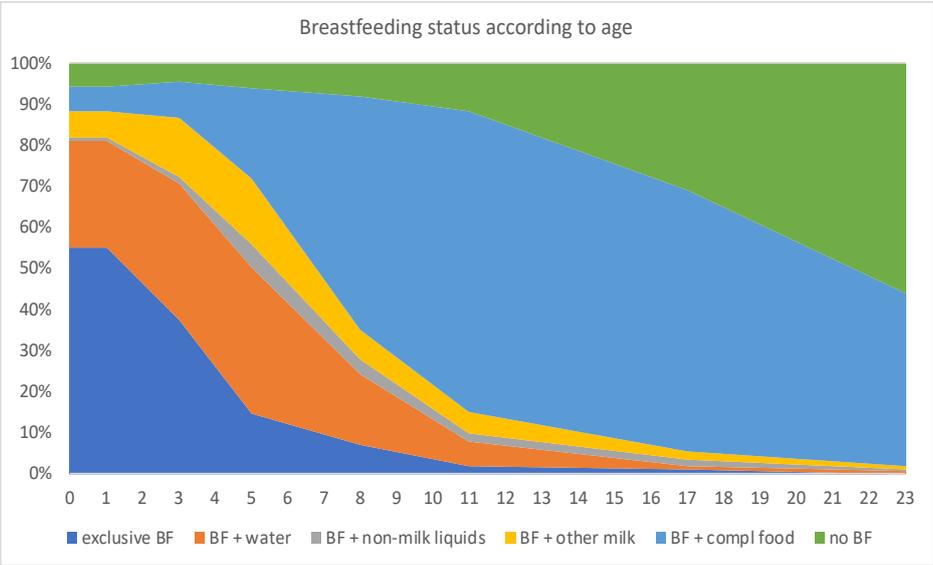


Fig 6: Breastfeeding and complementary feeding by age of child (in months), DHS 2017

However, while early initiation is common and has improved between 2012 and 2017, exclusive breastfeeding has declined. Only 36% of children under six months were exclusively breast fed as recommended and since exclusive breastfeeding declines with age, only 15% were exclusively breastfed when they reached 4-5 months of age. This is a significant decline from 2012 when 21% of the mothers were breastfeeding their baby at the age of 4-5 months.

2.2.4 Complementary Feeding and Dietary Diversity

From the age of six months, WHO recommends the introduction of complementary food to supplement the nutritional contributions from breastfeeding. From six to eight months, two to three meals of pureed foods should be introduced, while maintaining the same frequency of breast feeding. Food groups should be diverse and balanced, while avoiding added sugar and salt. At nine to eleven months, meals should be increased to three to four, and at 12 months, foods can be offered in small pieces to allow chewing. The transition from exclusive breastfeeding to family foods is the most critical period for children. Infants and young children should be fed a minimum acceptable diet to ensure appropriate growth and development. Without an acceptable diet, infants and young children are vulnerable to undernutrition, especially stunting and micronutrient deficiencies, and thus to increased morbidity and mortality. The Minimum Acceptable Diet (MAD) indicator is a composite indicator that takes into consideration both, the diversity of diet and the frequency of feeding.

According to the DHS 2017 only 9% of the children below 2 years of age receive a minimum acceptable diet according to WHO classification. As shown in Fig 7, especially younger children don't receive adequate food, mainly due to a lack of diversity. However, at the same time dietary diversity of mothers seems to be high with 80% of women achieving a Minimum Dietary Diversity (MDD) score of 5 or more food groups (DHS 2017). Similar observations

were made by the authors of UNICEF's Formative Research on Infant and Young Child Feeding in Tajikistan, which was conducted during the lean season in 2016 and revealed similar results. The authors found that in 47% of the households interviewed, the mother's diet was adequately diverse, while the child's diet was not. This would indicate that in some households there is a potential for behaviour change and mothers should be encouraged to share the diverse foods that are available in the household with their young children. But not all households are food secure and the authors also could show that families who reported seasonal food scarcity have a trend towards poorer dietary diversity (MDD) and they also could show a moderately positive correlation between dietary diversity scores for mothers and children¹⁴.

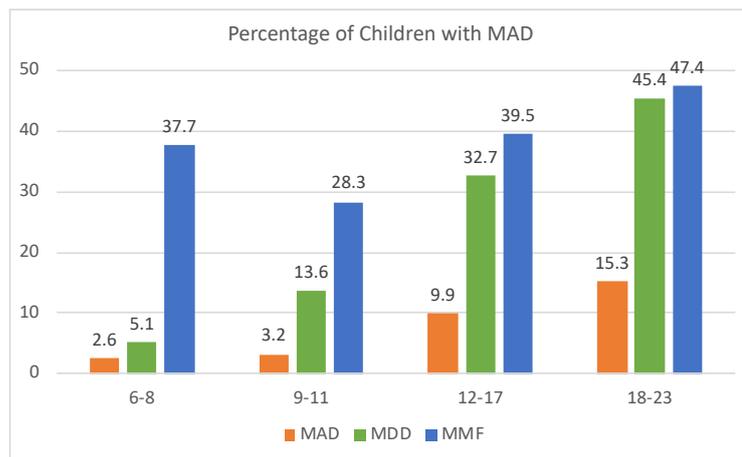


Fig 7: Percentage of children receiving Minimum Acceptable Diet by age group, DHS 2017

Further, in addition to the lack of diversity, the timing of the introduction of complementary food influences the nutritional status of under-twos. Only 57% of children aged 6-8 months received complementary foods together with their breastmilk. All the other children receive it later (no data is available for the 8% children who are not breast-fed). The late introduction of complementary foods might be partly responsible for the high rate of stunting in this population group as important micro-nutrients are introduced late to a child's diet such as iron and zinc which are not available in adequate quantities through breastmilk. More nutrient rich food items such as animal products and dark green leafy vegetables are introduced even later. Furthermore, children receive black tea from very early age which again hampers iron absorption and thus reduces even more the availability of iron. In some households, a lack of diversity in the family diet compounds the lack of diversity in the child's diet. The child is offered food from the family diet, such as broth from soup or bread soaked in tea with sugar. Children's diets are rarely planned, and they rarely receive foods purchased exclusively for them, such as fortified baby cereals. When food purchases are made

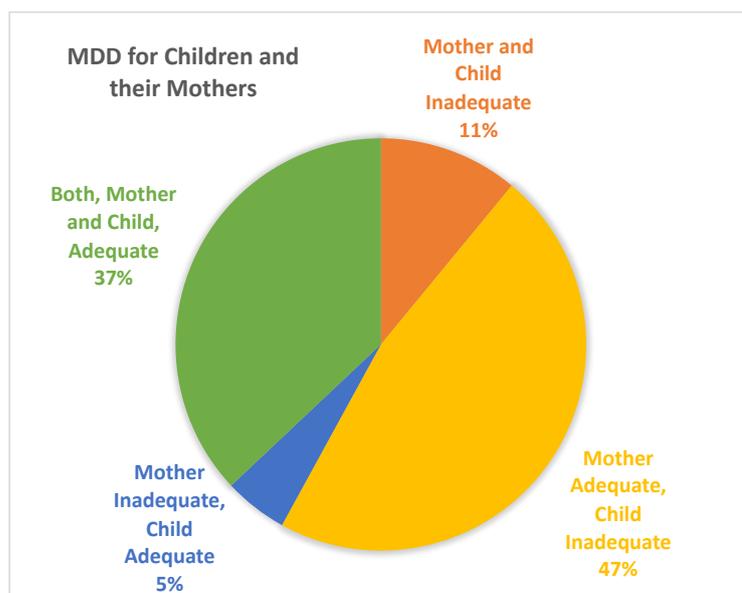


Fig 8: Comparison between MDD for mothers with MDD for children based on 5+ food groups of mothers and 4+ food groups of children

¹⁴ Klassen AC, Milliron BJ, Suehiro Y, et al. "Then you raise them with Shirchoy or cookies": Understanding influences on delayed dietary diversity among children in Tajikistan. *Matern Child Nutr.* 2019;15:e12694

for the children, these are often limited to formula, which is used as a supplemental food, even when a child is breast fed.

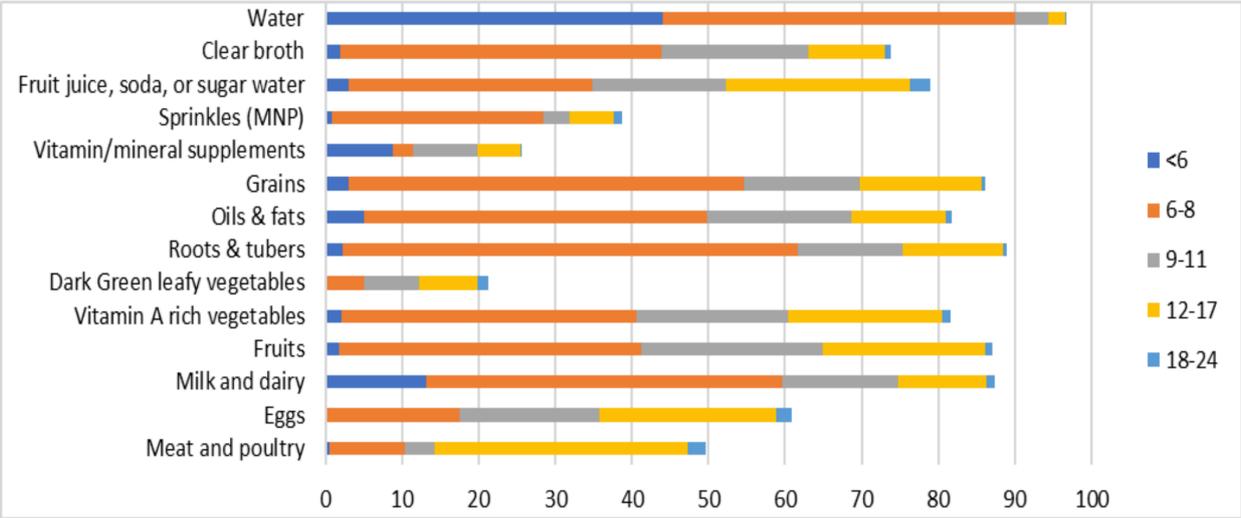


Fig 9: Age of child when first fed food or liquids other than breastmilk (WFP 2016, Fill the Nutrient Gap)

2.2.5 Typical Tajik Diet and Cost of a Nutritious Diet

Wheat is the most important staple food in Tajikistan, providing 50-70% of per capita caloric intake. It is predominantly consumed as bread. The Tajik diet is typically too high in energy (wheat and oil) and too low in nutritious food, it predominantly exists of “empty-calories”.

In the Fill the Nutrient Gap Study (2018), WFP calculated the cost of a nutritious diet using a linear programming tool, the CotD (Cost of the Diet) software developed by Save the Children UK. This programme determines the least expensive nutritious diet using common staple food and dietary habits. The modelling revealed that the typical Tajik diet contains too much oil, wheat, sugar, roots and tubers. In order to receive nutritious food, some of these items must be replaced by more nutrient-dense foods such as vegetables, fruits, dairy and other animal source foods. This is the case especially for population groups with high needs such as young children in their first 1,000 days, adolescent girls, pregnant and lactating women and the elderly.

However, modelling also showed that the nutritious diet costs 2.5-3.5 times more than a diet that meets only energy requirements. The current food expenditure (diet that only meets energy requirements) accounts already for 50-60% of total household expenditure. Therefore, a nutritious diet which is more than double the price is not affordable for 29-56% of households.

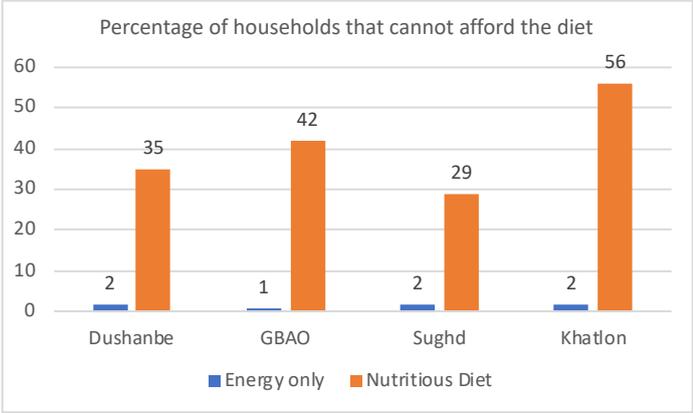


Fig 10: Percentage of households that cannot afford the diet, Cost of Diet Analysis 2018, WASH expenditure data 2017

2.2.6 Anaemia

Anaemia is a condition in which the number of red blood cells or their oxygen-carrying capacity is insufficient to meet physiological needs. Iron deficiency is thought to be the most common cause of anaemia globally, although other conditions, such as folate, vitamin B12 and vitamin A deficiencies, chronic inflammation, parasitic infections, and inherited disorders can also cause anaemia.

In 2017, 41% of women in child-bearing age and 42% of children between 6 and 59 months of age were anaemic. Approximately 50% of these cases are linked to iron deficiency. This level presents a severe public health problem. In 2016 and in 2009 levels were reported significantly lower, in 2016 only 26% of women and 26% of children and in 2009 24% of women and 31% of children were found to be anaemic. These figures would suggest that the situation has severely deteriorated between 2016 and 2017, over the period of just one year. However, this increase in anaemia is extreme, almost too extreme. Capillary blood samples are very sensitive to the methodology used (amount of squeezing applied, whether the first drop of blood was discarded etc.) and can easily get diluted with tissue fluids resulting in slightly increased levels of anaemia. Therefore, the comparison of the results (NNS 2009, NNS 2016 and DHS 2017) has to be done with caution.

In 2017, the prevalence of anaemia shows a high variability between rural and urban areas, especially within children. While in urban areas 33% of children were reported to be anaemic, rural areas had a prevalence of 44%. High differences had also been reported for the different regions with GBAO showing the highest prevalence (62% for children and 55% for women).

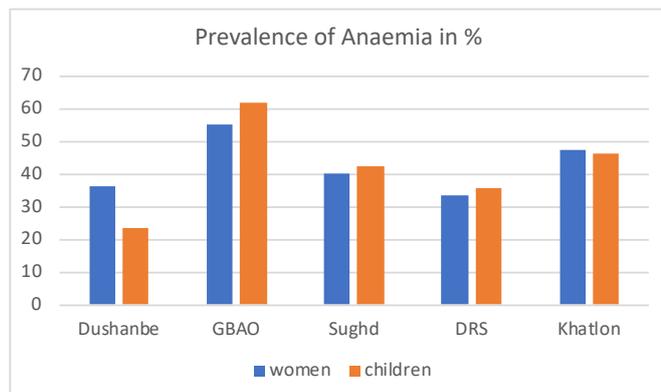


Fig 12: Prevalence of anaemia by region, DHS 2017

In 2017, the prevalence of anaemia in children varied depending on age. Results showed that children belonging to the age group 12-17 months showed the highest prevalence of anaemia with 66%. This indicates, that the weaning period plays an important role in the fight against anaemia. Several factors might contribute to this high prevalence: (a) the late introduction of weaning food and the fact that breastmilk does not contain sufficient iron for children above 6 months of age, (b) the low quality of weaning food in particular in relation to iron, and (c) the high frequency of diarrhoeal diseases at this age group which is partly caused by intestinal parasites such as helminths.

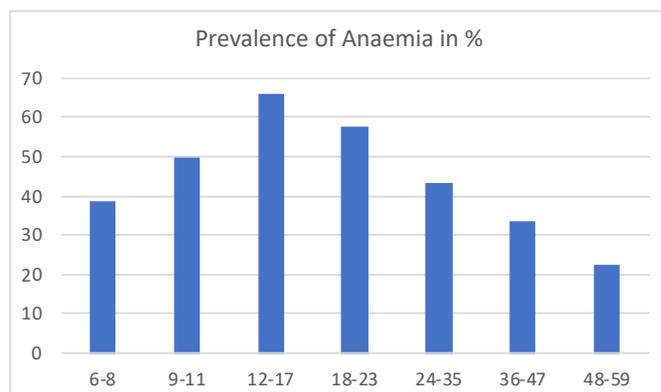


Fig 11: Prevalence of anaemia in children between 6 and 59 months of age by age group, DHS 2017

To reduce the impact of intestinal parasites on the nutritional status of children, The Government of Tajikistan implements national deworming campaigns. However, these campaigns in which deworming tablets are given as a precautionary measure, are targeted at

schoolchildren between 5 and 14 years only. Children below 5 years of age receive deworming tablets only for treatment purposes.

In the various national surveys (NNS 2009, DHS 2012, NNS 2016 and DHS 2017) mothers were asked if their children under the age of five had taken deworming medication in the six months prior to the survey. While in 2009 and 2012 almost 50% of children below 5 years of age received deworming treatment (46.7% and 49.7%, respectively) the amount had significantly declined and reached 20.7% in 2016 and 14.8% in 2017. However, these figures do not provide any information whether the decline is due to a reduced prevalence of intestinal parasite infestation or simply due to availability/access problems; or a combination of the two.

According to data from DHS 2017 the percentage of children receiving deworming medication increases with age ranging from 4.1% in the youngest age group (6-11 months), to 10.3% for children between 10 and 17 months of age and 19.1% for children between 36 and 47 months of age. When comparing the percentage of children receiving deworming medication with the prevalence of anaemia for the same age group, data suggest that the high prevalence of anaemia in children between 12 and 17 months of age is not predominantly caused by a high intestinal parasite infestation. Although intestinal parasites do play an important role in anaemia, especially for children 3 years and older, the other two factors (namely late introduction of weaning food and low quality of weaning food) seem to play an even bigger role.

2.2.7 Iodine Deficiency

Iodine is an essential micronutrient and prevents goitre and other thyroid-related health problems among children and adults. Since 1997, the Government of Tajikistan has addressed iodine deficiency disorder (IDD) through the National Programme for Elimination of IDD, which requires that salt be iodized to 45 parts per million (ppm). According to the World Health Organization, a country’s salt iodization program is considered to be on a good track to eliminate iodine deficiency when 90% of households use iodized salt.

In DHS 2017, household salt samples were tested for iodine levels and results suggest that 92% of households use iodised salt. This is an increase by 10% compared with the usage in 2012 (84%). Results of the National Nutrition Surveys (NNS 2016 and NNS 2009) were lower with 78% in 2016 and 62% in 2009. The reason behind this difference is that during the DHS salt was tested for the presence of iodine, while during the NNS samples were tested for the amount of iodine and only considered as iodised if they contained at least 15 ppm.

The low level of iodine in the diet due to low iodisation levels is also reflected in the prevalence of iodine deficiency as presented in the NNS. In 2016 51% of children between 6 and 59 months of age and 62% of women between 15 and 49 years of age were found to be iodine deficient. The highest prevalence was recorded in GBAO with 68% of children and 74% of mothers being iodine deficient.

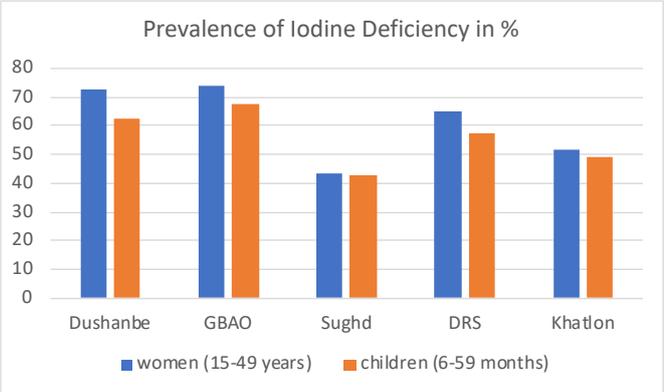


Fig 13: Prevalence of iodine deficiency by region, NNS 2016

2.2.8 Vitamin A Deficiency

Vitamin A is important for healthy vision, immune function and foetal growth and development. Vitamin A deficiency can cause visual impairment in the form of night blindness and, in children, may increase the risk of illness and death from childhood infections, including measles and those causing diarrhoea. Vitamin A deficiency can be assessed by measuring levels of Retinol Binding Protein (RBP) in blood. Women with levels of 0.7 $\mu\text{mol/L}$ or less are considered vitamin A deficient.

Results from NNS 2016 show that 47% of women between 15 and 49 years of age were vitamin A deficient. The highest prevalence for Vitamin A deficiency was found in Khatlon with 67%. Based on this prevalence, vitamin A deficiency has to be considered a serious public health problem among women of reproductive age in Tajikistan, as typically a prevalence rate above 20 per cent is considered the threshold for such a rating (WHO 2011).

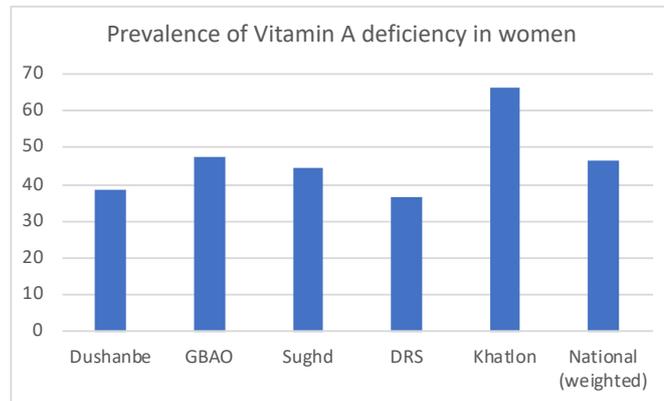


Fig 14: Prevalence of vitamin A deficiency in women by region, NNS 2016

2.2.9 Infections and Diarrhoea

Severe infectious diseases in early childhood – such as measles, diarrhoea, pneumonia, meningitis and malaria – can not only cause acute wasting but also have long-term effects on linear growth. Studies have consistently shown that especially diarrhoea is an important determinant of stunting. In a pooled analysis of nine community-based studies in low-income countries with daily diarrhoea household morbidity, the odds of stunting at 24 months of age increased multiplicatively with each diarrhoea episode (number of days with diarrhoea) before that age. The proportion of stunting attributed to five previous episodes of diarrhoea was 25%.¹⁵

In Tajikistan, 13% of children under the age of 5 years had diarrhoea in the 2 weeks preceding the survey. The highest prevalence was reported in children between 6 and 24 months of age. More than 21% of children in this age group were suffering from diarrhoea two weeks before the interview. This is a clear indicator for the importance of the weaning period on the development of the children. As mentioned above, episodes of diarrhoea during this period have direct impact on linear growth.

There are two simple and effective treatments for the management of acute diarrhoea: the treatment with oral rehydration salts (ORS) and the additional supplementation with zinc. Zinc supplementation has been found to reduce the duration and severity of diarrhoeal episodes and likelihood of subsequent infections for 2–3 months. Although the benefits of zinc supplementation in the management of diarrhoea have been well established, only 20% of the children who had diarrhoea received it.

The availability of zinc for the children with diarrhoea varied significantly between the regions. While in Dushanbe 37% and in GBAO 32% of the children received zinc supplementation, in all the other regions only between 18 and 19% of children received it.

¹⁵ Checkley W, Buckley G, Gilman RH, et al. Multi-country analysis of the effects of diarrhoea on childhood stunting. *Int J Epidemiol* 2008; 37: 816-30

2.2.10 Access to Safe Drinking Water

Although failing to reach the Millennium Development Goal (MDG) on safe drinking water, Tajikistan has made significant progress in providing access to improved drinking water sources since 2000. According to the DHS 2017 80% of households have access to an improved source of drinking water. According to the WHO, an improved source of drinking water includes piped water, public taps, standpipes, tube wells, boreholes, protected dug wells and springs, and rainwater.

In particular, Tajikistan has made progress in reducing the proportion of people with no drinking water supply. The share of those relying on “surface water” for their main drinking water source declined from 33% to 15% between 2000 and 2016. This was accompanied by an increase in access to improved water sources of the lowest tiers (tiers 1, 2). However, there was almost no change in the higher tiers (tier 3, 4, 5). Over this period, the proportion of people whose main water source were “improved on premises,” “piped on premises,” and “piped inside dwelling” remained at about 52 percent, 40 percent, and 23 percent, respectively. The only type of piped improved water source that had an upward trend, as shown in figure 15, was public standpipes or shared connections, which increased from 8 to 22 percent.

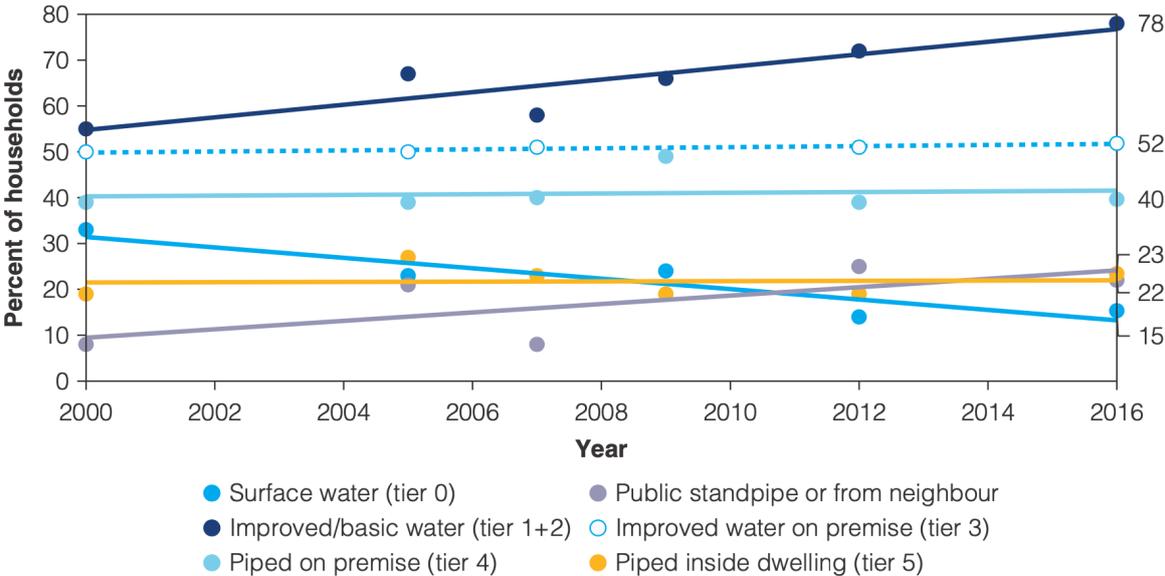


Fig 15: Changes in drinking water supply over the period 2000 through 2016
 Source: Multiple Indicator Cluster Survey (MICS) 2000, 2005; Tajikistan Living Standard Survey (TLSS) 2007, 2009; Demographic and Health Survey (DHS) 2012; Household WASH Survey 2016.

Data also show that there is a large difference between rural and urban areas. Rural households obtain water from unimproved sources much more often than urban households (28% versus 3%, DHS 2017). Big differences can also be observed between the administrative regions. While improved water sources are nearly universal in Dushanbe, still 36% of households in GBAO rely on “surface water”. GBAO is closely followed by Khatlon and DRS.

Even when households have access to an improved water source, they face significant challenges in the availability and continuity of their water supply; one out of four households in Tajikistan does not have access to sufficient quantities of water when needed (World Bank Wash Survey 2016).

2.2.11 Access to improved sanitation

Improved sanitation refers to types of facility that are more likely than others to separate human excreta from human contact. This includes the following types if they are not shared with people from other households: flush/pour flush to piped sewer system, septic tank, pit latrine, ventilated improved pit (VIP) latrine, pit latrine with slab and composting toilet. Facilities that do not meet the criteria are shared facilities (sanitation facilities of an otherwise acceptable type, shared between two or more households), unimproved facilities (including pit latrines without a slab or platform, hanging latrines or platform and bucket latrines), and open defecation (when human faeces are disposed of in the fields, forest, bushes, open bodies of water, beaches, or other open spaces or disposed of with solid waste).

In Tajikistan, access to sanitation has improved, particularly over the last decade. The share of the population that does not have access to a sanitation facility has steadily declined. Open defecation in Tajikistan has all but vanished, falling from 6% in 2005 to less than 3% in 2012 to below 1% in 2016¹⁶. This overall decline was accompanied by an increase in access to flush/pour toilets and pit latrines with slab. The DHS 2017 describes that 97% of households have an improved sanitation facility that is not shared with other households.

However, while almost all households have access to an improved sanitation facility, it seems that awareness about the risks of building toilets too close to water sources (drinking water sources, pumps, springs or canals) is low.

Furthermore, in 67% of the surveyed households there was no place in or around the latrine to wash hands, and in 54% of the households there was no toilet paper or other cleansing material in the latrine according to the World Bank WASH survey. Less than 30% of the interviewed households indicated that they wash their hands after defecation and only 11% wash their hands with soap.

Schools in Tajikistan generally have sanitation facilities available on site, though there are differences between rural and urban areas. In rural areas, unimproved latrines are more common: about 26% of rural schools have a pit latrine without slab or an open pit, as opposed to only 11% in urban areas. Also, handwashing after defecation is not common in Tajikistan because water and soap are scarce. Especially during the winter months, schools in mountainous areas often do not have any water for children to wash their hands.

2.2.12 Intra-Regional Variability

The above described information by region is based on administrative boundaries. However, especially the Sughd region is extremely heterogenous and areas in the north around the city of Khujand differ extremely from the mountainous area in the Zerafshan Valley. Hence, results for the Zerafshan Valley are probably more similar to other mountainous regions such as lower areas of GBAO than to the results of Sughd. Similar issues apply to the Khatlon region. The eastern part of Khatlon is a remote mountainous area that differs significantly from the western Khatlon with its large cotton fields. Unfortunately, no current nutrition related information is available using livelihood zones rather than administrative boundaries.

Furthermore, also within a more or less homogenous region the situation can vary significantly, and pockets of malnutrition and food insecurity can be masked by the overall data of a region.

¹⁶ World Bank Group: Glass Half Full – Poverty diagnostic of water supply, sanitation and hygiene conditions in Tajikistan, 2017

2.2.13 Seasonal effects on nutrition

The following figure shows the seasonal calendar for rural areas in Tajikistan. For subsistence farmers food availability and diversity strongly depends on the season and on economic inputs due to labour migration. The period from January through to middle of April is a lean period during which many rural households report food scarcity and often face difficulties.

Seasonal calendar of a typical Tajik year:

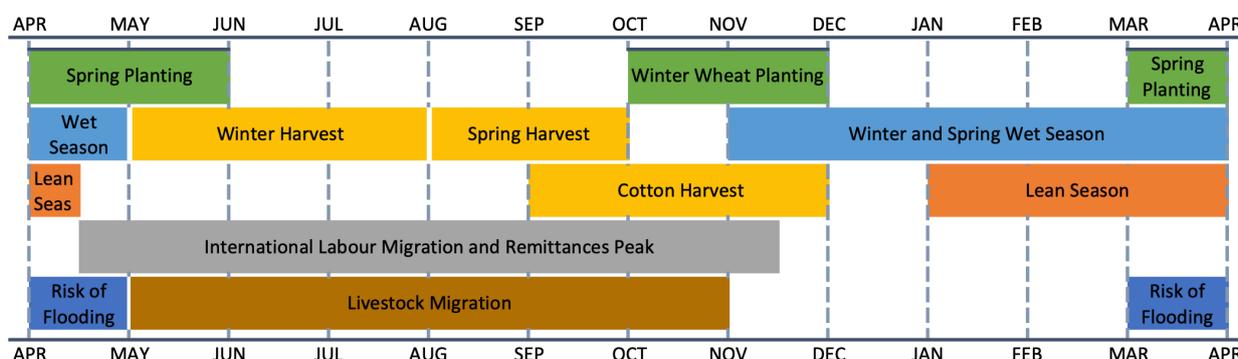


Fig 16: Seasonal calendar of a typical Tajik year. Source: FEWSNET 2013

In urban areas, where food is available in the markets all year round, nutrition doesn't depend on the seasons to the same extent. WFP reported in their Cost of the Diet Analysis in 2018 that in Dushanbe the average cost of a nutritious diet in 2017 did not change much by month or season¹⁷

2.2.14 Summary of Potential underlying causes of malnutrition

As described above the following factors play an important role in malnutrition of children and women:

- (1) Low exclusive breastfeeding rates – many infants (0-5 months) receive water
- (2) Late introduction of complementary foods
- (3) Child dietary diversity low, much lower than among women
- (4) Lack of household income to provide better nutrition
- (5) Diversified food only seasonally available
- (6) Low quality iodised salt – often levels below 15 ppm
- (7) No access to markets during some seasons
- (8) Low quality of drinking water
- (9) High prevalence of diarrhoeal diseases, especially in children below 2 years of age due to poor hygiene and sanitation

¹⁷ WFP, Fill the Nutrient Gap Tajikistan, June 2018

2.3 Policy Framework and Government Priorities

While until 2009 nutrition was not on the agenda of the Government of Tajikistan (GoT), Food Security and Nutrition seems to be a priority now. There is a strong commitment to scaling up nutrition actions in the country from all sides. Tajikistan joined the SUN-Movement in 2013 and endorsed several legislations relevant to nutrition including legislation on promotion of breastfeeding, on salt iodisation and on flour fortification. Within the health sector, Tajikistan has several strategies developed, which concern nutrition. These include:

(a) National Health Strategy of the Republic of Tajikistan 2010-2020

Strategy developed by the MoHSPP in 2010.

(b) Nutrition and Physical Activity Strategy (NaPAS) for Tajikistan 2014-2024

Developed by the Nutrition Centre, a unit under the MoHSPP

(c) National Development Strategy 2016-2030 (includes nutrition strategy)

Based on this strategy the Food Security and Nutrition Cluster of the Development Coordination Council (DCC) has developed a Food Security and Nutrition Concept Note describing priorities to be addressed in regard to nutrition.

(d) Strategy on Sustainable Provision of School Feeding by 2027

The program focuses on strengthening the capacities of schools by renovating and equipping school kitchens, training staff, establishing kitchen gardens and green houses in order to improve access to fresh vegetables and ensure healthy meals for the pupils. It is expected that as of 2021 the Government will gradually commence funding of the school feeding.

(e) Common Results Framework (CRF)

Developed by the Multi-Sectorial Coordination Council for Scaling Up Nutrition (MSCC)

(f) Multi-Sectoral Action Plan on Nutrition 2020-2025

Developed by Dr. Sherali Rahmatulloev together with the Technical Working Group of the Multi-Sector Coordination Council (MSCC) to be submitted to the Government for approval by the end of March.

(g) 1000 Golden Days, National Social Behaviour Change Strategy to reduce stunting and improve child health in Tajikistan

This strategy is expected to be approved by the Government by the end of March 2020

(h) Guideline on the Partnership with Communities on Health Issues

Developed and approved by the MoHSPP in 2017

(i) Legislation on Food Fortification (salt iodisation, flour fortification with Fe, Folic acid, Zn and Vit B12)

Developed by the Nutrition Centre, MoHSPP and approved by the GoT in 2019

Further, in cooperation with UN agencies and other Donors the Government of Tajikistan has implemented several nutrition studies in the country such as the Demographic and Health Surveys (DHS) in 2012 and 2017, the Micronutrient Status Survey in 2009 and the National Nutrition Survey in 2016.

In Tajikistan, health services and thus nutrition related services are delivered at four levels: rural (village), district (rayon) and city, regional (oblast) and national (republican). In villages, Primary Health Care (PHC) services are provided in rural health centres with a medical doctor or in health houses with feldshers, nurses and midwives. At the rayon and city level, health centres have family medicine doctors and narrow specialists who provide

outpatient services. Inpatient services are provided by rural health hospitals, city/rayon hospitals, and republican hospitals.¹⁸

Since the implementation of the National Programme on the Development of Family Medicine (2011-2015) based on the National Health Sector Strategy (2010-2020) great measures have been taken in order to establish the family medicine model as the basis of improved services due to better quality and accessibility for the population. However, while at rayon level most doctors have received training on Family Medicine (FM), staff of health houses and rural health centres have often not been trained until now.

2.4 Scaling Up Nutrition (SUN)

Since joining the SUN movement in September 2013, a multi-sectoral platform has been established in the form of the Multi-Sectoral Coordination Council (MSCC) to work at the policy level for nutrition. This coordination body is anchored within the MoHSPP and chaired by the SUN focal person, the First Deputy Minister of MoHSPP. Members of the MSCC are typically Deputy Ministers. The MSCC is supported by the Technical Working Group, which meets more regularly and includes the Ministry of Education, Ministry of Economic Development and Trade, Ministry of Agriculture, Ministry of Finance, Ministry of Industry and New Technology, representatives of the President's Office, development partners and civil society. The Director of the Maternal and Child Health Department chairs this technical working group.¹⁹ The SUN activities are strongly supported by UNICEF and USAID who function as SUN donor co-conveners and by GIZ who provided technical assistance in establishing a national SUN secretariat under the MSCC and dedicates a permanent staff to assist the MoHSPP with multi-sectoral coordination and communication (position currently vacant). Since 2019, the MSCC consists of representatives of 18 government ministries and agencies, two academia, eight international agencies and one civil society. The MSCC systematically meets on quarterly basis²⁰.

Although there is a strong donor commitment to nutrition, no SUN donor platform has been developed so far. Donors meet frequently in the Development Coordination Council (DCC) and its working group on food security and nutrition, which currently also serves as a complementary donor platform for the SUN movement. When required, the DCC Food Security and Nutrition Cluster meeting is dedicated to the SUN movement²¹.

Tajikistan has also established a Food Security Council under the Prime Minister's Office, which coordinates strategic decision making in relation to food security in the country. However, this council has not met in a regular fashion since it was created.

The GoT in cooperation with the MSCC, the national SUN secretariat and an international consultant, has recently prepared a Common Results Framework (CRF) for the scaling up of nutrition actions across sectors. This framework allows the GoT to align the various nutrition related strategies towards an agreed set of common priorities and targets. Based on this framework the MSCC, in collaboration with development partners and member ministries, is working currently on a costed multi-sectoral action plan for nutrition which is supposed to be approved by the Government at the end of March 2020.

¹⁸ Review of the National Programme on the Development of Family Medicine 2011-2015 in Tajikistan, WHO

¹⁹ Support to Tajikistan through a review of the alignment of nutrition policies and plans and development of initial stakeholder mapping of nutrition activities, MQSUN Report November 2014

²⁰ SUN Tajikistan. Joint-Assessment by the multi-stakeholder platform. 2019

²¹ DCC-Tajikistan Homepage <https://untj.org/dcc/category/human-development-new/food-security-nutrition-working-group-new/>

Since the SUN Multi-Sectoral Coordination Council is placed within one line-ministry (MoHSPP), its strength in convening meetings across sectors might be limited. It is currently discussed how this council could be empowered and whether it could be anchored at a higher level. Several options are currently discussed; each has its own strength and weakness²²:

- Raising the political profile of the SUN Focal Point from the MoHSPP to Presidential Administration (Prime Minister or Deputy Prime Minister) or the Ministry of Finance:
Pros: (a) high-level political leadership, (b) enables the SUN platform to convene across ministries, and (c) nutrition to be considered in its own right rather than aligned to any particular sector (e.g. health or food security);
Cons/challenges: elevating the political positioning holds the risk that it becomes too high to be functional on a regular basis.
- Merging the SUN MSCC with the Food Security Council under the Prime Minister's Office:
Pros: (a) high-level political leadership, and (b) enables the SUN platform to convene across ministries;
Cons/challenges: (a) Platform has to be revitalised, and (b) nutrition would be aligned with food security.

2.5 Stakeholders

Undernutrition remains a serious public health problem in Tajikistan and has a significant impact on human and economic loss. In 2012 undernutrition was calculated to have been responsible for 35% of deaths among children below 5 years of age, which equals to 7,500 deaths per year and thus 13% of Disability Adjusted Life Years (DALYs). In economic terms this equals an annual loss of 41 Mio USD, 12.3 Mio USD due to workforce lost to death and 28.6 Mio USD due to productivity lost to stunting, iodine deficiency, childhood anaemia and LBW.²³ A number of programmes are in place aiming at improving this situation. These include nutrition specific and nutrition sensitive measures that are implemented by a multitude of stakeholders. However, current measures are still not sufficient and nutrition interventions need to be scaled up.

The following international organisations are currently engaged in improving the situation by implementing nutrition specific and/or nutrition sensitive programmes. This list is by far not exhaustive – only organisations and their programmes are listed for which information was received during the field visit.

ACTED

ACTED is engaged in developing rural economy by introducing and supporting community-based tourism, and by supporting small and medium size entrepreneurs, natural resource management (including energy efficiency) and agricultural sector development.

AKHS

AKHS mainly trains Community Health Promoters and PHC staff on topics related to Family Medicine. In corporation with AKF and MSDSP, AKHS implements a water and sanitation project in the eastern parts of Khatlon Oblast funded by SDC. Further, AKHS is engaged in rehabilitating and equipping the health Houses and rural Health Centres.

²² Support to Tajikistan through a review of the alignment of nutrition policies and plans and development of initial stakeholder mapping of nutrition activities, MQSUN Report November 2014

²³ Situation Analysis, Improving Economic Outcomes by Expanding Nutrition Programming in Tajikistan, February 2012, UNICEF and World Bank

FAO

FAO's Food Security and Nutrition Project is implemented in the Khatlon region and focusses on (a) school feeding activities including the building of greenhouses in schools (in cooperation with WFP), the distribution of fresh vegetables to school kitchen, capacity building and education in nutrition; (b) nutrition education for communities in Primary Health Care Facilities; (c) training of journalists in nutrition; and (d) ToT for PHC staff and staff of Healthy Lifestyle Centres (HLC).

Caritas

Caritas has been engaged in Muminobod District for many years. Activities covered the whole range of rural development activities and disaster risk management.

CESVI

In Khatlon, CESVI's activities mainly focus on rural development, including water & sanitation and income generation activities. In Sughd CESVI is a partner in Welthungerhilfe's Natural Resource Management Project funded by the EU.

GIZ

Currently, GIZ activities in nutrition mainly focus on the Khatlon region through their Improved Maternal, Infant and Child Nutrition Project. This project consists of three main parts: (a) improving nutrition related knowledge of health staff by introducing nutrition into the curriculum at all levels of the training cascade; (b) village based activities on nutrition such as introducing the concept of community based nutrition volunteers, supporting families in creating kitchen gardens, providing cooking demonstrations, introducing nutrition education at schools; and (c) supporting SUN by providing technical assistance to the SUN secretariat.

Helvetas

Helvetas aims at improving food and nutrition security by supporting communities in income generating activities and diversification of their diet with interventions such as the promotion of kitchen gardens, seed distribution etc. Furthermore, Helvetas is engaged in the integrated management of water resources.

Landell Mills

Landell Mills are involved in the EU funded watershed management programme in Zerafshan valley and are responsible for the development of a water sector policy, setting up of river basin organisational structures, development of water management planning tools and the improvement of irrigation infrastructure.

MSDSP

MSDSP is the national implementing partner of the Aga Khan Foundation (AKF). MSDSPs activities cover all aspects of rural development with a strong emphasis on community mobilisation. MSDSP mainly works in mountainous areas of Tajikistan with a strong focus on GBAO, but also in Zerafshan Valley and the mountainous districts in Eastern Khatlon which are bordering GBAO. In border areas to Afghanistan, MSDSP implements projects with a holistic approach called MIAD (Multiple Input Area Development). Through this approach, and in cooperation with other organisations belonging to the Aga Khan Development Network (AKDN), social and economic interventions occur simultaneously in a geographic area to accelerate development over time. MSDSP is one of the partners of the watershed management project funded by the EU.

Oxfam

Oxfam is mainly involved in activities related to WASH, disaster risk reduction and economic justice including the support of businesses along the food chain such as the addition of value and marketing. Projects are mainly in Eastern Khatlon and the Zerafshan Valley, where they are a direct partner in Welthungerhilfe's Natural Resource Management Project funded by the EU.

UNDP

UNDP implements activities in all regions. In relation to nutrition the organisation is engaged in sustainable economic growth and the promotion of social and economic opportunities especially for women, in activities related to energy and environment with a strong focus on water supply and sanitation, and in disaster risk reduction and resilience.

UNICEF

UNICEF works at a national level and focusses on three areas: (a) SUN: UNICEF functions as SUN co-convener and supports the MSCC in the development of strategies such as the Multi-Sectoral Action Plan for Nutrition and the behavioural change communication strategy "1000 Golden Days". (b) Implementation: UNICEF supports the government in management and treatment of acute malnutrition and the provision of micronutrients such as iron and folic acid as well as food fortification (salt and flour). And (c) education and training: UNICEF supports government in curriculum development on child feeding practices and other modules for nutrition.

IntraHealth (Feed the Future programme)

Feed the Future exists of several projects:

- Health and Nutrition Activity
- Lands Market Development
- Agriculture and Water Activity

The Health and Nutrition Activity focuses mainly on (a) supporting hospitals in care at all levels (district, oblast, national), (b) Forming and training group of trainers at national level, (c) providing equipment for hospitals, and (d) training of volunteers as community health workers, equipping PHCs, and training of PHC staff.

WFP

WFP is supporting the GoT in social protection with focus on access to food. This includes school feeding, treatment of moderate acute malnutrition in cooperation with WHO and UNICEF (IMAM), provision of fortified cereals, and the TB-Programme (technical assistance). In 2021 the Government of Tajikistan is planning to take over the school feeding programme and WFP will phase out. WFP is also involved in vulnerability assessments and has published the study "Fill the Nutrient Gap".

In addition to the described international organisations engaged in the effort to reduce malnutrition in Tajikistan at various levels, many national NGOs work in the field of food security and nutrition.

3 Overall Strategy and Approach

The current recommendations for a nutrition strategy are based on two core frameworks, the lifecycle approach and the framework of causal relationships of malnutrition.

3.1 The Life Cycle Approach – Target Population

Poor nutrition often starts in uterus and extends well into adolescent and adult life. A low birth weight (LBW) infant is more likely to be underweight or stunted in early life and thus experience a variety of developmental deficits. In case of girls undernourished during pregnancy and lactation this results again in LBW babies and undernourished children, and also leads to an increased infant mortality rate. These links can be presented in a vicious cycle that lasts beyond the life cycle of an individual.

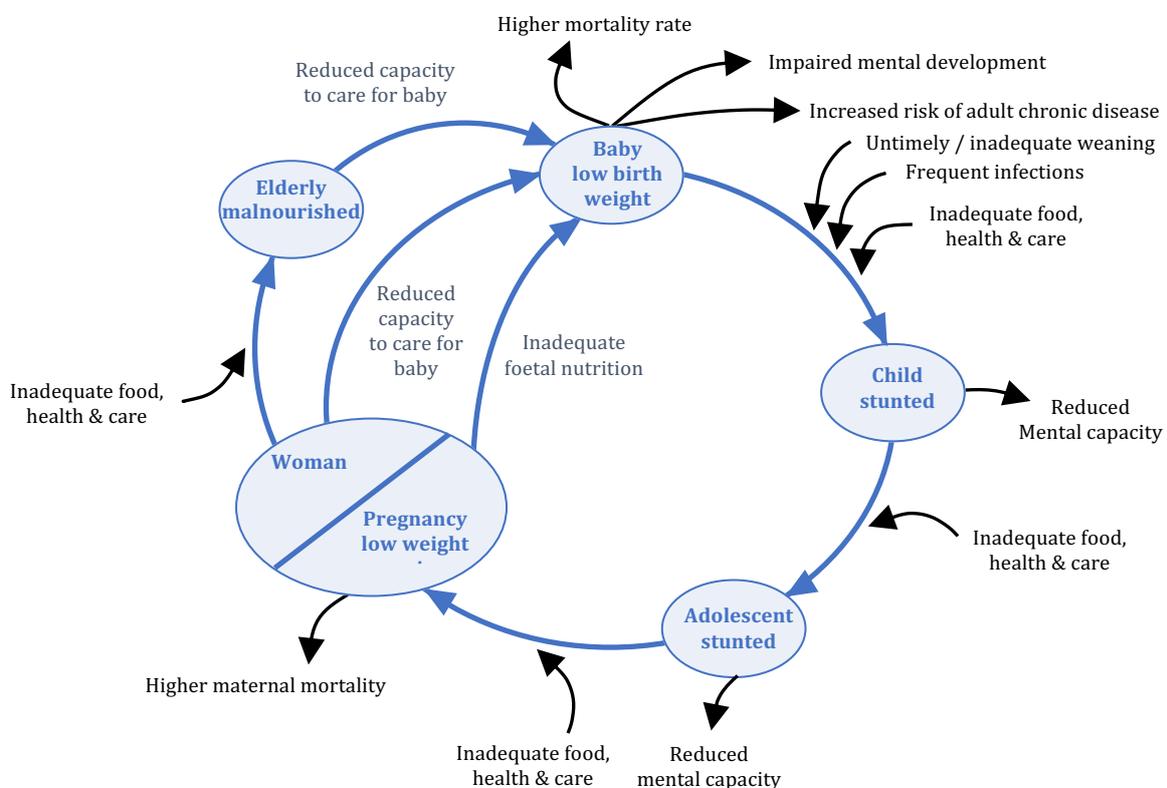


Fig 17: Lifecycle of undernutrition, adapted from the United Nations Standing Committee on Nutrition (SCN)

If the nutritional status shall be improved this vicious cycle has to be interrupted. For this, focus should be given to two intervention groups, (a) the first 1,000 days of a baby's life and (b) female adolescents. The right nutrition during the first 1,000 days window can have a profound impact on a child's ability to grow, learn and rise out of poverty. In Tajikistan, the highest rate of stunting was reached for children 24 months of age which indicates that this window is crucial for intervention.

Optimum growth in the first 1,000 days of life is also essential for prevention of overweight. Rapid weight gains in the first 1,000 days are strongly associated with adult lean mass, whereas weight gains later in childhood lead mainly to adult fat mass. In particular, evidence

suggests that infants whose growth faltered in early life and who gained weight rapidly later in childhood might be at particular risk of adult obesity and non-communicable diseases.²⁴

The window of 1,000 days refers to the time period from conception to 24 months of age. However, interventions during pregnancy of stunted women have to be handled with caution as the risks for the mother during birth are increasing with an increased weight of the baby. Therefore, and since the foundations for undernutrition are laid very early in the cycle, it is recommended, that adolescent girls are included into the target group and thus go well prepared into their first pregnancy.

3.2 Framework of the Causal Relationships of Malnutrition and possible interventions

Undernutrition arises from complex, multiple and interactive causes at three levels: immediate, underlying and basic. Immediate causes are linked to the individual and include inadequate dietary intake, diseases and inadequate care. Underlying these are causes referring to the household and community level. These include household food insecurity, inadequate knowledge/education, unhealthy household environment and lack of health services. These underlying causes are often underpinned or caused by income poverty and insufficient services (e.g. health and education). All these factors are finally determined by the third level, the political, economic, social and cultural environment. Gender inequalities play a role at all levels and are key factors in decision making at household level and therefore have direct impact on the nutrition status of mothers and children.

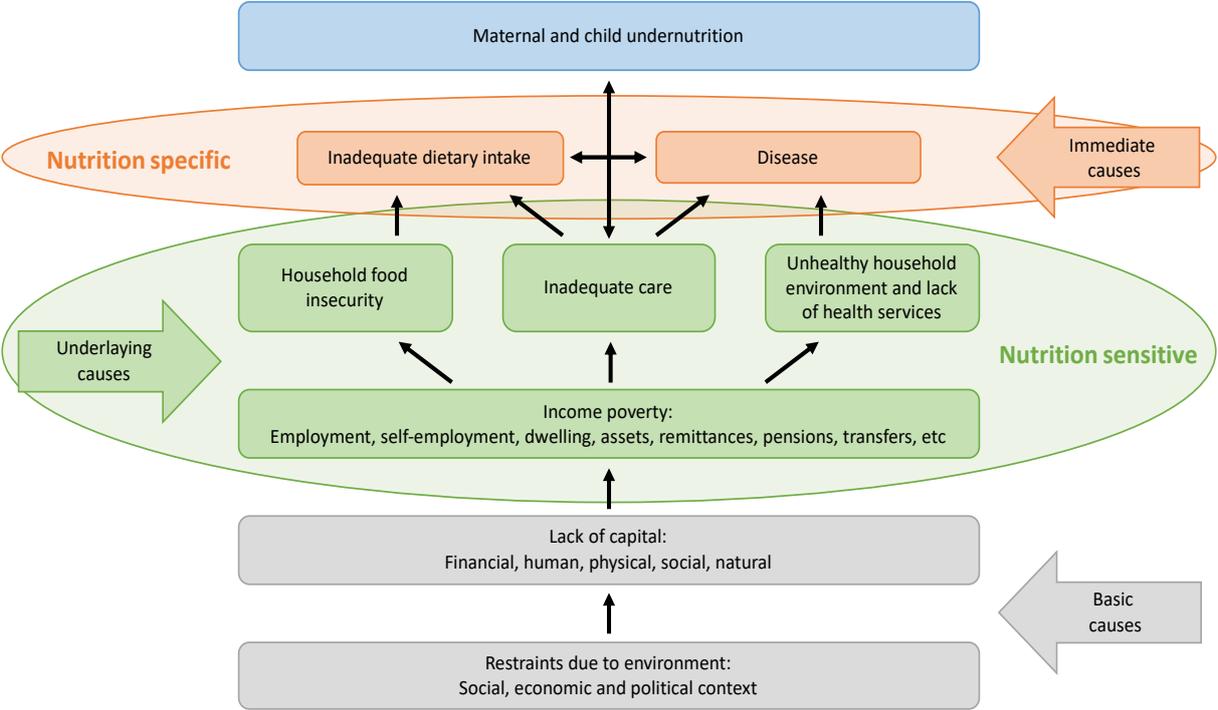


Fig 18: Framework of causal relationships of maternal and child undernutrition, adapted from Black RE et al, 2013²⁵

²⁴ Black RE, Victora CG, Walker SP, Bhutta ZA, et al; Maternal and child undernutrition and overweight in low-income and middle-income countries. Lancet 2013; Vol 382 August 3
²⁵ Black RE et al; Maternal and child undernutrition: global and regional exposures and health consequences. Series on maternal and child undernutrition; Lancet 2008; 371:243-60

Thus, in order to accommodate this complex framework of undernutrition a multi-sectoral approach with interventions at different levels is required to effectively address undernutrition in the long-term. This approach includes **nutrition-specific interventions** that directly affect the immediate determinants of nutrition (e.g. food intake and health) as well as interventions that aim on having impact on the underlying and basic determinants of nutrition - **nutrition sensitive development**.

3.2.1 Nutrition specific interventions

Nutrition-specific interventions are interventions that directly address inadequate dietary intake or compromised health - the immediate causes of malnutrition. The effectiveness of these interventions on maternal and child nutrition are well defined. In a Lancet Series on maternal and child undernutrition the most effective measures to prevent undernutrition were identified²⁶ and rated as "best buys" in development by the Copenhagen Consensus Centre^{27,28,29}. Building from this, a study was carried out by the World Bank in 2009 examining programmatic feasibility and cost effectiveness³⁰. This study identified a more selective package of 13 highly cost-effective interventions from which the following are considered to be appropriate for Welthungerhilfe in Tajikistan.

Behaviour Change Communication:

In nutrition-specific interventions, the predominant aim for Welthungerhilfe should be to motivate vulnerable population groups to change current behaviour that impairs their nutrition. Therefore, behaviour change communication is crucial for the successful implementation of Welthungerhilfe's projects aiming at nutrition security in Tajikistan and thus should be seen as a cross cutting theme influencing all intervention areas discussed below. In a formative research study conducted by WFP in 2019³¹ current behaviour in regard to nutrition is described and topics that need addressing are highlighted. Building on this research and on other behaviour change communication strategies such as the Governments BCC Strategy (1000 Golden Days), Welthungerhilfe is advised to investigate in current behaviour change communication methods/approaches and collect best practices that show successful behaviour change communication interventions in the Tajik context and uses these to revise or develop its own behaviour change communication strategy.

Compromised health – strengthened health sector:

The health sector is closely interwoven with nutrition and is thus a main sector for nutrition-specific interventions. Poor health conditions (such as frequent diarrhoea) result in malabsorption of important nutrients and energy and often go along with reduced appetite resulting directly in a compromised nutritional status. At the same time, undernutrition makes the body more susceptible to diarrhoeal diseases and all type of illnesses including chronic diseases. This easily can lead into a vicious circle. Furthermore, poor health conditions also result in reduced labour force and thus in reduced income or agricultural production and is therefore indirectly compromising the nutritional status. Due to this close relationship it is of utmost importance that primary health care (PHC) services are strengthened in Tajikistan. Many players are already engaged in this field, however, often not in a coordinated fashion. Therefore, in order to improve the required health services and to

²⁶ Bhutta ZA, et al.; What works? Interventions for maternal and child undernutrition and survival. Series on maternal and child undernutrition; Lancet 2008; 371:417-40

²⁷ Horton S, et al.; Copenhagen Consensus 2008 Challenge Paper: Hunger and Malnutrition. Draft of May 11, 2008.

²⁸ Copenhagen Consensus 2008 Results. www.copenhagenconsensus.com

²⁹ Copenhagen Consensus 2012 Results. www.copenhagenconsensus.com

³⁰ Horton S, et al.; Scaling up nutrition: What will it cost? World Bank, 2009.

³¹ Improving Nutritional Outcomes in Tajikistan: SBCC Formative Research Findings by Dr Rowena Merritt, September 2019

better coordinate activities on the ground, the Government of Tajikistan (MoHSPP) has published guidelines on a coordinated approach to the implementation of health promotion in villages³² ensuring that the health system structures that are responsible for health promotion, namely the Primary Health Care System and Healthy Lifestyle Centres (HLC) are fully engaged. It is therefore recommended, that Welthungerhilfe engages in strengthening these structures by (a) providing training to their staff and volunteers, (b) providing or advocating for information material and equipment (e.g. develop small library at Medical Houses for pregnant/breastfeeding mothers; develop demo CDs (movies) on breastfeeding and weaning for PHC providers and pregnant/breastfeeding mothers; prepare mass media campaigns), and (c) ensure that all activities related to health promotion are implemented following the published guidelines and that in areas where the Healthy Lifestyle Centres have identified community-based volunteers these volunteers are involved in Welthungerhilfe's activities. However, not all villages have such volunteers, it is therefore also recommended that Welthungerhilfe identifies Community Nutrition Volunteers (CNVs) in those villages who do not have HLC volunteers and links them up with HLCs and PHC providers.

Breastfeeding:

The first 1,000 days of a child's life are crucial for development. As national surveys in Tajikistan show, stunting accumulates over the first 24 months of a child's life and wasting is highest between birth and 6 months of age. Therefore, the breastfeeding and weaning period is extremely important in the fight against malnutrition (wasting, stunting and overweight). While mothers usually start breastfeeding immediately after birth, not many mothers continue to exclusively breastfeed until the child is 6 months old. The majority of mothers provide water together with breastmilk which not only reduces the child's appetite and thus has negative impact on their sucking behaviour (resulting in reduced production of breastmilk), but also can cause diarrhoea if the water the mother provides is not clean. In order to improve breastfeeding habits in Tajikistan, it is therefore recommended that Welthungerhilfe engages with primary health care (PHC) providers at village level and supports their effort in educating and advising mothers in breastfeeding.

Complementary feeding for infants after the age of six months:

Data from national surveys suggest that in Tajikistan weaning food is inadequate and that mothers rarely prepare special food for children. The weaning period is typically understood as a gradual introduction to adult meals with early food limited to sweetened tea, biscuits and broth followed in a second stage by mashed starches such as potatoes. Neither the food diversity nor the food frequency is adequate for this age group and the provision of fruits and vegetables is not sufficient. Therefore, it is recommended that Welthungerhilfe engages in the promotion of appropriate weaning. This could be done by engaging with CNVs and HLC volunteers who act as link between primary health care providers and mothers or CBOs such as women groups. These volunteers could provide information at household level or organise group sessions at village level such as cooking demonstrations for weaning food.

Improved hygiene practices including hand washing:

Handwashing after defecation is not common in Tajikistan and according to a WASH survey conducted by the World Bank, less than 30% of the interviewed households indicated that they wash their hands after defecation and only 11% wash their hands with soap. Furthermore, national surveys suggest, that the prevalence of diarrhoea among children below 5 years of age is very high and as described in chapter 2 this has direct impact on the prevalence of stunting. Therefore, it is strongly recommended that Welthungerhilfe engages

³² Guideline on the partnership with communities on health issues; Ministry of Health and Social Protection of Population, 2017

in behaviour change communication activities in relation to hygiene behaviour and in particular to handwashing with soap. This could be done in cooperation with community-based organisations (CBOs) and/or CNVs and HLC volunteers.

Improved dietary diversity at household level:

While energy requirements are mainly met in Tajikistan, diversity of consumed food is still a problem. The typical Tajik diet contains too much oil, wheat, sugar, roots and tubers. In order to receive nutritious food, some of these items must be replaced by more nutrient-dense foods such as vegetables, fruits, dairy and other animal source foods. This is the case especially for population groups with high needs such as young children in their first 1,000 days, adolescent girls, pregnant and lactating women and the elderly. It is therefore recommended that Welthungerhilfe engages in communicating nutrition related information to vulnerable households. CNVs and HLC volunteers could play an important role in this, e.g. by providing cooking demonstrations on how to cook new vegetables or on old traditional recipes rich in nutrients that had been lost. Volunteers could also become mentors for vulnerable households and support them in developing strategies to improve nutrition and in the decision-making process.

Provision of micronutrient supplements:

Although the provision of micronutrients (therapeutic zinc supplements for diarrhoea management, multiple micronutrient powders, de-worming drugs for children (to reduce losses of nutrients), iron-folic acid supplements for pregnant women to prevent and treat anaemia, and vitamin A supplements) is of utmost importance for the fight against undernutrition it is not recommended that Welthungerhilfe gets directly involved in this.

However, it is recommended that Welthungerhilfe actively engages in awareness raising activities through informing and educating mothers on the importance of these micronutrients and thus improve compliance. This could be done by providing training to village nurses and volunteers (HLC volunteers and CNV). In addition, distributing agencies could be supported by providing regular feedback on the situation on the ground and information of potential shortages. Further, Welthungerhilfe could get involved in advocacy activities towards organisations who provide micronutrients and thus increase the availability of such. Currently, village health centres do not have sufficient quantities of any of these micronutrients.

Provision of micronutrients through food fortification:

In 2019, the Government of Tajikistan revised its law on food fortification. While in the past only salt had to be fortified with Iodine, it is now mandatory to fortify wheat with Fe, Folic acid, Zn, and Vit B12. This is an important step towards improved nutrition in Tajikistan.

While it is not recommended, that Welthungerhilfe gets directly involved in food fortification activities such as iodisation of salt and wheat flour fortification, it is recommended that Welthungerhilfe gets engaged in awareness raising and communication activities at community level focusing on the benefits of micronutrients for the human body and on best ways to storage fortified food products (e.g. dry and out of sunlight).

Summary of nutrition-specific interventions:

The nutrition-specific interventions recommended here for Welthungerhilfe are exclusively soft approaches. The recommendations have the common theme of strengthening the capabilities of front-line health and nutrition workers and volunteers to support and inform society on how to develop their capabilities, and make best use of available resources, for improving their nutrition. These soft approaches can be effective when used in isolation, and also when used in support of

other programmes that incorporate hard approaches (supply and distribution of micronutrients, fortified foods and complimentary feeding supplements).

Although hard approaches are widely accepted as very effective and necessary in situations like those faced by Tajikistan, they are not included in the recommendations for Welthungerhilfe because they require a level of resources and continuity beyond the scope of most Welthungerhilfe programmes. Instead it is recommended that Welthungerhilfe focus on the above described soft approaches. These soft approaches are mainly related to behaviour change communication and the provision of information.

Focusing on the described soft approaches provides Welthungerhilfe with greater opportunities to specialise in what is a technically and socially demanding endeavour. It is not unreasonable to suggest that over time Welthungerhilfe's contribution will be greater through this specialisation than in diluting its efforts over both, soft and hard interventions. However, this approach does present measurement challenges. For example, it will be costly, if not impossible, to separate out Welthungerhilfe's own contribution to the overall goal of improved nutrition when it works in coordination with other programmes using hard interventions. When assessing its own performance in such situations Welthungerhilfe will be forced to settle for using the measurement of results directly related to its chosen activities rather than impact on nutrition.

Further, especially in respect to the distribution of micronutrients, Welthungerhilfe is advised to ensure that its nutrition-specific programming is coordinated with programmes providing relevant hard interventions. Ideally the coordination will also extend to joint planning on result measurement. Further, when planning new nutrition-specific programming it is advised to assess the right mix of hard and soft interventions, even when only planning to implement soft interventions (see section 4.2 below on advocating the need for more micronutrient distribution).

Assessing micronutrient availability (supplements, fortified food), for example, will help Welthungerhilfe ensure micronutrient recommendations, that form part of its soft intervention programming, are pitched at achievable levels and avoid the uncomfortable, even unethical, practice of recommending levels that are unachievable, though desirable in a more perfect world.

3.2.2 Nutrition-sensitive development

Nutrition-sensitive interventions are interventions that focus on the underlying and basic causes of undernutrition and are linked to the complex framework in which nutrition is embedded. ***Nutrition-sensitive development*** aims to cooperate these interventions or at least avoids harm to the underlying or immediate causes of undernutrition, especially among the most nutritionally vulnerable populations and individuals.

Although direct nutrition-specific interventions are crucial for successfully tackling undernutrition, especially for achieving a fast response, it is of utmost importance that the underlying causes of undernutrition are simultaneously addressed by nutrition-sensitive development that integrates nutrition actions into other sectors in order to achieve an effective long-term improvement.

These nutrition-sensitive interventions are embedded in a range of sectors. The current section describes these sectors and provides recommendations on activities and interventions Welthungerhilfe could get involved in to achieve long-term improvement in nutrition.

Agriculture & food security:

Agriculture & food security is of fundamental importance to human nutrition, both as a direct determinant of household food consumption, and through its role in livelihoods and food

systems. There is a growing understanding that agricultural development and food security provides an obvious and needed entry point for efforts to improve nutrition.

As presented in the national surveys, one key intermediate cause for undernutrition is the lack of food diversity in the households, in particular for children. While the majority of households have enough food to fulfil their energy requirements their diet is not balanced and severely lacks micronutrients. Even if the level of food diversity is sufficient for adults, children are not receiving the same variety although their needs are even higher.

Therefore, in order to improve food diversity in the households it is strongly recommended, that Welthungerhilfe continues their efforts in providing services to improve the production and marketing of nutritious foods, the availability of nutritious food all year round and especially the consumption of more diversified and nutritious food. Below are possible engagements promoting agricultural development and food security that have been filtered through the lens of improved nutrition. While some of these activities are already part of Welthungerhilfe's programme, others are not. In order to provide a complete picture of potential interventions, both are listed here:

- Promote homestead food production to increase dietary diversity (seed distribution, training, demonstration plots)
- Promote kitchen gardens and green houses at schools (cultivated vegetables can be used for cooking demonstrations during labour classes or school canteen)
- Introduce new vegetables
- Promote use of wild plants (e.g. sea buckthorn) and herbs for juice and infusions
- Promote green houses for vegetable production (own consumption and marketing)
- Promote fruit growing (own consumption and marketing)
- Promote food preservation (own consumption and marketing)
- Promote small animal breeding (poultry farming, bee keeping, etc)
- Promote fish farming if feasible (Although not many fish farms are successful in Tajikistan, some are. It is therefore recommended that Welthungerhilfe investigates the feasibility of fish farming in Tajikistan)
- Facilitate physical and/or economic access to markets
- Promote local production of specialist products that meet quality standards
- Introduce new technologies in agriculture in cooperation with research institutions. This could range from the introduction of new micronutrient-rich varieties of fruits and vegetables to more sophisticated food preservation technologies in order to maintain nutrient levels (e.g. vitamin friendly solar drying methods)
- Promote improved food storage to reduce loss and to increase availability of nutritious food during lean periods

Gender:

Nutrition is intricately linked to women's biological, economic and social roles, influencing their own and their children's nutritional status. Women are the main care providers for infants and young children, therefore ensuring women have the means and time to breastfeed and provide adequate care is essential to reducing malnutrition. Especially during the weaning period, women need sufficient time to prepare adequate weaning food for their infants.

Therefore, although it is important to involve women and men in activities to improve their livelihoods, it is crucial to always keep a balance and not to overburden women with new interventions. While on the one hand interventions aimed at women usually have great impact on household food security and also empower women, it is, on the other hand,

important to protect women of increased workload, especially in those families in which husbands and youths are engaged in migration work.

It is therefore recommended that Welthungerhilfe

- Carefully assesses the balance between the impact on household food security and livelihood that new interventions provide, and the additional burden these interventions cause on women and thus reducing their time for breastfeeding and weaning, when planning new projects.
- Investigate and identify interventions/inputs that reduce women's workload and free up women's time (e.g. improved supply of safe drinking water so that women spend less time fetching water, solar techniques to reduce the use of firewood and thus the time women spend to collect it).
- Information sessions for men on the importance of breastfeeding and appropriate weaning for children's development, and women's time and energy required for this.

Education

Education is often neglected in the effort to improve nutrition although it is closely linked to nutrition. Especially the level of education in adolescent girls plays an important role in improving the nutritional status of the next generation. Lack of knowledge related to nutrition and good feeding practices often result in inadequate care and inadequate breastfeeding and weaning practices; and thus, directly to a low nutritional status of the baby or child. As especially the first 1,000 days of a baby's life are important for future development education is a key sector for intervention. Furthermore, lack of education also can compromise the health status due to an unhealthy lifestyle and/or lack of hygiene leading to frequent infections and thus compromise the nutritional status indirectly. At the same time undernutrition, especially during the first 1,000 days of a baby's life and micronutrient deficiencies can result in impaired mental development and thus lead to a vicious circle. Furthermore, better education of girls and women, increases females' decision-making power at a household level and strengthens their voice at a community level. As women are the ones caring for their family this empowerment is often channelled towards a better nutrition and care at the household level. The following interventions are examples of activities Welthungerhilfe might want to get involved in:

- Provide training (ToT) in nutrition for PHC providers, CNV, Healthy Lifestyle Centres, and teachers
- Provide staff training in nutrition (Welthungerhilfe and implementing partners)
- Promote nutrition education as part of labour classes at schools³³

Water & sanitation

Water & sanitation interventions primarily act to impact undernutrition by preventing diarrhoea and other enteric diseases. The greatest nutritional gains in this area are likely to be made by investing in improved access to safe drinking water, improved sanitation at schools (26% of rural schools do not have improved sanitation facilities) and hygiene promotion, in particular promotion of handwashing with soap after defecation. Many schools do not have any handwashing facility near their latrines and thus children are not encouraged to wash hands after defecation. This applies in particular to mountainous areas when any water source near the latrine is likely to be frozen.

³³ Labour classes are classes usually on Saturday which are not part of the official curriculum and are used for extracurricular activities

The improvement in access to safe drinking water can also significantly reduce women's workload and thus contribute to better care and feeding practices which subsequently can result in better infant nutrition. The following activities are examples of interventions Welthungerhilfe is already engaged in or might want to get involved in:

- Improve safe drinking water supply
- Improve sanitation facilities at schools
- Improve handwashing facilities at schools
- Communicate the importance of good hygiene practices such as appropriate hand washing, especially after defecation (see nutrition-specific interventions).

Summary of nutrition sensitive interventions

There is less evidence overall about the effectiveness of indirect interventions, and the evidence challenge for these interventions is much greater compared to direct nutrition-specific interventions. This is because, (a) these interventions have rarely a stated nutrition objective and hence are not evaluated by this criterion; and (b) it is often difficult to ascertain their impact on undernutrition when they are preventative or when a long and complex causal pathway is involved, and different contexts can influence the outcomes. Yet, the nutritional impact of interventions in areas such as health, agriculture, food security, social protection, gender, education and water & sanitation is improved when the nutrition-sensitive aspects of the programme are emphasised with clearly defined nutrition outcomes. The objective of nutrition-sensitive development is therefore to apply a "nutrition lens" in sectoral programmes in order to improve or protect nutritional status³⁴. This nutrition-lens can be implemented by (a) nutrition friendly planning of programmes (see Annex 3) and (b) measuring impact on nutrition indicators.

3.2.3 Surveys and Surveillance

Although many surveys have been carried out and much has been learned, several aspects and causes for the high prevalence of stunting and micronutrient deficiencies have still not been fully understood and further research is needed. In order to strengthen Welthungerhilfe's impact on improving nutrition in Tajikistan it is recommended that Welthungerhilfe engages in nutrition research by (a) cooperating with academia in implementing small studies and/or (b) supporting other partners in the country who carry out quantitative or qualitative assessments.

This might include one-off studies to understand underlying causes of compromised nutrition such as social and cultural drivers to feeding practices and constraints faced by mothers:

- Why do mothers give water to their babies during the first 6 months?
- Why is the dietary diversity in children so much lower than in women?
- Identification of traditional foods high in nutrients that got lost due to time constraints mothers are facing or prestige.

This might also include surveillance activities to measure and understand seasonality and longer-term trends. Surveillance should ideally be implemented in cooperation with the Government and/or the UN in order to assure sustainability. This for example could include more regular Cost of Diet assessments in cooperation with WFP, monitoring of market prices for a larger variety of foods in cooperation with the Governments statistic Department

³⁴ Mucha N; Implementing nutrition-sensitive development: Reaching consensus. Briefing paper number 20, November 2012. Bread for the world.

(Tajstat) and/or assessing minimum dietary diversity in women and children across different seasons, including lean seasons, to better understand seasonality of food diversity. However, surveillance is time and labour intensive and should therefore be part of an ongoing project.

3.3 Beneficiaries

Primary beneficiaries for nutrition-specific activities (training and cooking demonstrations, awareness raising and promotion of micronutrients) are women of childbearing age (in particular pregnant and lactating women), adolescent girls and children in their first 1,000 days of life. Some activities should also involve the women's mothers in law and husbands, as mothers in law are very influential in the household and husbands are usually going to the market to buy food products.

Primary beneficiaries for nutrition-sensitive activities in the sector of agriculture, infrastructure and economic development are able farmers (male and female) with some land and basic resources.

Primary beneficiaries for welfare are the most vulnerable households who do not possess any land or homestead garden and thus fully depend on donations and public welfare support programmes.

Individuals and institutions who function as implementing partner and receive training in the form of ToT are to be considered as secondary beneficiaries. These are PHC providers (mainly nurses), Community Based Organisation and their thematic subgroups, Community Nutrition Volunteers, Healthy Lifestyle Centres and their volunteers, and schoolteachers.

3.4 Target Area

As described in chapter 2, representative data from national surveys is only available for the five administrative regions Dushanbe, Sughd, Khatlon, DRS and GBAO. However, since the regions are extremely heterogenous, especially Sughd and Khatlon, the described results don't necessarily describe the situation in the more remote mountainous areas of Zerafshan Valley (Sughd) and Eastern Khatlon (mountainous area bordering GBAO). The real situation of these mountainous areas is presumably more comparable with the situation in lower valleys of GBAO. But no representative nutrition related data is currently available using livelihood zones rather than administrative boundaries. Given these observations and the fact, that the prevalence of stunting and wasting has increased recently in GBAO (and presumably somewhat similar in other remote mountainous areas) it is recommended that Welthungerhilfe continues its focus on activities in these remote mountain villages. This includes the Zerafshan Valley, Eastern Khatlon, DRS and GBAO.

Furthermore, data suggest that the prevalence of overweight and obesity is increasing and has reached high levels in urban areas. It is therefore recommended, that Welthungerhilfe investigates opportunities in tackling the issue of overweight and obesity and subsequently widens the implementation area into urban settlements, if appropriate.

4 Advocacy

Advocacy is a continuous and adaptive process of gathering, organising and formulating information into argument, to be communicated to decision-makers through various interpersonal and media channels, with a view to influencing their decision towards raising resources or political and social leadership acceptance and commitment for a development programme, thereby preparing a society for its acceptance (UNICEF 2005).

The following paragraph describes in a first step channels, that can be used at the various administrative levels to bring nutrition issues to the attention of decision makers. In a second step this paragraph describes nutrition topics that Welthungerhilfe might want to communicate.

4.1 Communication channels

4.1.1 National Level

At the national level the most important forum to influence policy is the SUN movement. A meeting was held with Sherali Rahmatulloev who is one of the key players at SUN. During the meeting Mr Rahmatulloev promised to add Welthungerhilfe to the membership list for SUN and to invite Welthungerhilfe to the next SUN meeting. Once accepted as a member, Welthungerhilfe will have the opportunity to advocate for better nutrition, and in particular for the needs of rural population in remote areas.

Mr Rahmatulloev worked as Head of the Mother and Child Health Department at the MoHSPP before retirement. He always played a key role in the SUN movement and still enjoys high respect in the MoHSPP and the SUN network. In order to intensify the relationship to MoHSPP and the SUN network it is recommended to maintain close relationship with Mr Rahmatulloev. This could be done by contracting Mr Rahmatulloev to conduct a workshop or training at Welthungerhilfe. The theme of the workshop – as an example - could be about SUN and its structure. Partner organisations could be also invited to this workshop.

In addition to SUN the highest level to advocate for nutrition issues and influence legislation is the Nutrition Commission of Parliament. To bring issues to the attention of the Parliament a letter has to be sent (through the Ministry of Foreign Affairs). The Parliament then assigns a working group to assess the issue. If successful, this can lead to amendments to the legislation. Some NGOs have successfully used this channel to achieve amendments to the legislation on CBOs.

Another way to advocate for nutrition is during the President's speech in January. At the end of each year, issues can be submitted to the President's office to be incorporated into the President's speech. If the topic is selected the President will include it in his New Year's Speech which gets high attention by all population groups, influential people as well as ordinary households. All speeches are available on Internet under President.tj in several languages, including English.

In order to advocate for nutrition within the international community Welthungerhilfe might want to consider co-chairing a conference on nutrition. This could be done in cooperation with GIZ or Donor organisations. Welthungerhilfe's partner organisations could also use the forum to present their work with either contributions as speakers or poster presentations and information stands.

To increase Welthungerhilfe's visibility (and the visibility of its partner organisations) at national level the following measures could be used:

- *Interview with journalists:*
The pro-governmental newspaper "Sadoi Mardum" was established in 2014 and is a trice weekly newspaper. It is one of the most widely circulated papers in the country and can be used as a channel to reach wide population groups.
- *Interview on TV:*
The "Safina" programme is a state-owned generalist television channel that is widely watched. Journalists can be invited to the Welthungerhilfe office to conduct interviews for broadcasting which have highest visibility, especially if the interview is presented before or after the 8 o'clock news which is the time with the highest viewing rate.

4.1.2 District Level

In each District there are three entry points to raise issues with the District Government:

- The District Governor invites the district level Working Group in a regular fashion. This is the forum at which NGOs have the opportunity to raise issues of concern and ask questions. It is recommended that Welthungerhilfe and its partner organisations use this working group meeting to present questions and raise issues.
- Every 6 months the Deputy District Governor, who is in charge for INGOs, invites to a Coordination Meeting to discuss and share information on planned interventions. It is recommended that Welthungerhilfe participates in these meetings and shares relevant information.
- Welthungerhilfe in Zerafshan Valley has close relationship with Ayni and Penjiket Hukumat and provides quarterly reports on project activities to the Hukumat. It is recommended that this coordination and information sharing be continued.

4.1.3 Subdistrict Level

At Jamoat level, the best entry point to raise issues related to nutrition is the Jamoat Council (elected members). This council meets regularly and issues that need decision can be brought to their attention by submitting a letter through the Jamoat administration. The Council has the power to address issues and make decisions.

4.1.4 Village Level

In order to spread information at village level, the Mohalla Committee (MC) can be used as messenger. The Mohalla Committee is a registered CBO and has the power to raise issues at Jamoat level if needed. Usually, influential villagers such as religious leaders, teachers, nurses, and businessmen are members of the MC. These MCs can be powerful partners in the implementation of projects.

Typical awareness raising activities, which the MC could support, are village gatherings to provide information on nutrition, events with role plays and competitions (at village level and at schools) or cooking demonstrations.

4.2 Topics for Advocacy

The first 1,000 days of a child's life are the most crucial years as during this time period foundations for future life are laid. It is also during this period that the prevalence for wasting

and stunting is highest in Tajikistan according to various national surveys. Therefore, all needs to be done to improve the nutrition status of this population group and Welthungerhilfe's advocacy should include the following topics³⁵:

Exclusive breastfeeding and appropriate weaning

Since exclusive breastfeeding is not very common in Tajikistan and complementary feeding is not appropriate, the population should urgently be sensitized to these issues. This can be done through awareness-raising measures such as mass media campaigns, distribution of information material as well as training of PHC/HLC employees and community volunteers.

Importance of micronutrients

Micronutrient deficiencies are at a severe level in Tajikistan and therefore it is of utmost importance that children receive enough micronutrients either through a more balanced diet (supported by nutrition-sensitive activities), or through micronutrient supplementation and fortified food (nutrition-specific activities). While in the past Welthungerhilfe has been mainly engaged in nutrition-sensitive activities in Tajikistan, it is recommended that Welthungerhilfe also engages in the field of nutrition-specific interventions. However, given Welthungerhilfe's capacity and experience in Tajikistan focus should be given to training and advocacy rather than the distribution of micronutrients or production of fortified food. Therefore, advocacy towards better nutrition through an improved availability of micronutrients is part of this strategy. The key topics for advocacy are:

- The importance of micronutrient supplementation – advocacy towards international organisations in order to improve coverage of supplementation
- The importance of de-worming drugs for children as a measure to reduce losses of micronutrients – advocacy towards international organisations in order to increase availability of these drugs at PHC facilities
- Health benefits through micronutrient supplementation – advocacy towards PHC providers, HLCs, community volunteers and CBOs
- Health benefits through de-worming, especially for children with frequent episodes of diarrhoea – advocacy towards PHC providers, HLCs, community volunteers and CBOs
- Preparation of nutritious weaning food – advocacy towards PHC providers, HLCs, community volunteers and CBOs

Improved hygiene practices

As described in chapter 2, diarrhoeal episodes have direct impact on linear growth (stunting). Therefore, it is strongly recommended that Welthungerhilfe engages in advocacy towards better hygiene and hand washing habits. This includes the provision of general communication material to the communities as well as training for PHC and HLC employees, and community volunteers.

Improved dietary diversity

Dietary diversity is a key problem in Tajikistan. It is therefore recommended that Welthungerhilfe promotes measures towards better nutrition by advocating for more fruits and vegetables and thus increased diversity in the daily diet. This advocacy activity should be mainly addressed to Community Volunteers (CNVs and HLC volunteers), CBOs, and teachers.

³⁵ Please note, that all health-related communication material must be approved by the Ministry of Health through its PHC facility or its Healthy Lifestyle Centres.

Annex 1: List of Surveys, Reports and Publications

Surveys and Situation Analysis

Feed the Future, USAID. Cost of the Diet in Khatlon. Assessing access to a nutritious diet in USAID Zone of Influence. December 2016.

Klassen CA, Milliron BJ, Leonberg B et al.: Formative research on infant and young child feeding and maternal nutrition in Tajikistan, UNICEF, Drexel University, 2016

Lavado R, Seitz W, Thiebaud A: Childhood stunting in Tajikistan: Quantifying the association with wash food security, health and care practices, Discussion Paper November 2017, World Bank Group

Ministry of Health and Social Protection of Population, World Bank, UNICEF: National Micronutrient Status Survey in Tajikistan, 2016

Ministry of Health and Social Protection of Population, World Bank, UNICEF: National Nutrition Survey in Tajikistan 2016, Results

Ministry of Health, UNICEF (2010): Micronutrient Status Survey in Tajikistan 2009

SCN: Ending malnutrition by 2020: An agenda for change in the Millennium; Chapter 2, Global nutrition challenges: a life-cycle approach; February 2000

Statistical Agency under the President of the Republic of Tajikistan, Ministry of Health and Social Protection of Population of the Republic of Tajikistan, and ICF International (2018): Tajikistan Demographic and Health Survey 2017. Dushanbe, Tajikistan

Statistical Agency under the President of the Republic of Tajikistan, Ministry of Health and Social Protection of Population of the Republic of Tajikistan, and ICF International (2013): Tajikistan Demographic and Health Survey 2012. Dushanbe, Tajikistan

Statistical Agency under the President of the Republic of Tajikistan: Food Security and Poverty No 2, 2019

Takeshima H, Akramov K, Park A et al.: Agriculture-nutrition linkages, cooking time, intrahousehold equality among women and children; Evidence from Tajikistan, IFPRI Discussion Paper 01882, November 2019

Takeshima H, Akramov K, Park A: Agriculture – Nutrition Linkages in Tajikistan; Evidence from Household Survey Data, IFPRI Discussion Paper 01770, November 2018

USAID, World Food Programme, Famine Early Warning Systems Network (FEWSNET): Livelihoods zoning “plus” activity in Tajikistan, January 2011

World Bank, UNICEF: Situational Analysis Improving economic outcomes by expanding nutrition programming in Tajikistan, 2012

World Bank Group: Glass Half Full – Poverty diagnostic of water supply, sanitation and hygiene conditions in Tajikistan, 2017

World Bank Group, Macroeconomics and Fiscal Management: Heightened Vulnerabilities Despite Sustained Growth; Country Economic Update; Tajikistan 2017

World Food Programme: Fill the Nutrient Gap (FNG) Analysis Tajikistan, Key Findings. Dushanbe, May 2018

World Food Programme, Ministry of Health and Social Protection of Population, Scaling Up Nutrition: Fill the Nutrient Gap Tajikistan, Summary Report, June 2018

World Food Programme, UNICEF: Tajikistan Food Security Monitoring, Bulletin July 2017, Issue 19

World Food Programme: Climate risks and food security in Tajikistan; A review of evidence and priorities for adaptation strategies, April 2017

World Food Programme: Market Environment Assessment Tajikistan – Rasht Valley, Khatlon & Faizobod, GBAO

Country Strategies

Development Coordination Council, Food Security and Nutrition Cluster. Food Security and Nutrition in Tajikistan. Priorities to be addressed in the National Development Strategy 2016-2030. January 2015

Government of Tajikistan: National Development Strategy of the Republic of Tajikistan for the period up to 2030, Dushanbe 2016

Government of Tajikistan: Nutrition and Physical Activity Strategy for the Republic of Tajikistan 2015 – 2024, Dushanbe 2014

Innovation Development Centre, Republic of Tajikistan: Country Strategic Review: Food Security and Nutrition, Dushanbe 2018

Ministry of Health and Social Protection of Population: State Institution “Republican Healthy Lifestyle Centres”, Summary Guide for Community Health Teams, Republic of Tajikistan, 2017

Ministry of Health and Social Protection of Population: Guidelines on the Partnership with Communities on Health Issues, Dushanbe 2017

SUN

MQSUN+: Midterm Review of the Scaling up Nutrition Movement: Final Report, December 2018

MQSUN. Support to Tajikistan through a Review of Nutrition Policies and Plans and Development of Initial Stakeholder Mapping of Nutrition Activities. November 2014

MQSUN. Tajikistan Undernutrition Gap Analysis Report. September 2015

SUN movement. Joint Assessment by National Multi-Stakeholder Platform Tajikistan April 2015 – April 2016

SUN movement. Joint Assessment by National Multi-Stakeholder Platform Tajikistan, 2019

Behaviour Change Communication

Government of Tajikistan: 1000 Golden Days – National social and behaviour change strategy to reduce stunting and improve child health in Tajikistan

Merritt R: Improving nutritional outcomes in Tajikistan: SBCC Formative Research Findings, September 2019

Publications in Scientific Journals

Barth-Jaeggi T, Zandberg L, Bahruddinov M, et al.: Nutritional status of Tajik children and women: Transition towards a double burden of malnutrition; *Matern Child Nutr.* 2019; e12886

Bhutta ZA, Das JK, Rizvi A: Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost? *Maternal and Child Nutrition* 2; *Lancet* 2013; 382: 452-77

Bhutta ZA, et al: What works? Interventions for maternal and child undernutrition and survival. Series on maternal and child undernutrition; *Lancet* 2008; 371: 417-40

Black RE, Victora CG, Walker SP, et al.: Maternal and child undernutrition and overweight in low-income and middle-income countries; *Maternal and Child Nutrition* 1; *Lancet* 2013; 382:427-51

Black RE, et al.: Maternal and child undernutrition: global and regional exposures and health consequences; *Lancet* 2008; Vol 371

Copenhagen Consensus 2008 Results. www.copenhagenconsensus.com

Copenhagen Consensus 2012 Results. www.copenhagenconsensus.com

Horton S, et al: Copenhagen Consensus 2008 Challenge Paper: Hunger and Malnutrition; Draft of May 11, 2008

Horton S, et al.: Scaling up nutrition: What will it cost? World Bank 2009

Klassen AC, Milliron BJ, Suehiro Y, et al.: “Then you raise them with Shirchoy or cookies”: Understanding influences on delayed dietary diversity among children in Tajikistan; *Matern Child Nutr.* 2019; 15: e12694.

Mucha N: Implementing nutrition-sensitive development: Reaching consensus. Briefing paper number 20, November 2012; Bread for the World

Ruel MT, Alderman H, Maternal and Child Nutrition Study Group: Nutrition-sensitive interventions and programmes: how can they help to accelerate progress in improving maternal and child nutrition? *Lancet* 2013; 382: 536-51

Wood EA, MCNamara K, Kowalewska A et al.: Household decision-making around food in rural Tajikistan: a cross-sectional study to help extension workers in the field; *Food & Nutrition Research* 2018, 62:1330

Welthungerhilfe Guidelines and Reports

Assessment on Nutrition and Health Status of Women and Children with Specific reference to Ayni and Panjakent Districts of Tajikistan – Key Findings and Recommendations; Saraswathi Gopala Rao

Context Analysis of Nutrition (CAN), Welthungerhilfe 2019

How to implement PtIN – practical guidelines, Welthungerhilfe July 2019

LANN+ Practitioner Manual, October 2017

Market Mapping Analysis in Zerafshan Valley, Enhancing Water and Natural Resource Management and Protection in upper catchments of Zerafshan Watershed Tajikistan May 2018

Midterm Evaluation Report, Enhancing Water and Natural Resource Management and Protection in upper catchments of Zerafshan Watershed, Tajikistan, December 2019

Multiannual Country Programme Tajikistan, 2017 – 2021; Welthungerhilfe 2017

Nepal's Context Analysis of Nutrition, Final Report November 2019, Vianney Labe, Nirmala Bista

Nutrition Situation Analysis Report Afghanistan: Samangan, Kabul, Nangarhar and Kandahar, November 2018 to March 2019

Third Interim Report, Enhancing Water and Natural Resources Management and Protection in upper catchments of Zerafshan Watershed, July 2018 – June 2019

Annex 2: List of Interview Partners

Name	Organisation	Position	Date
Kishwar Abdualishoev	AKF	Chief Executive Officer	09.02.20
Mr. Abduljabor	IPD	Director	10.02.20
Dr. Abdul Kosim	IPD	Nutrition Specialist	10.02.20
Mushkinisso Gozieva	IPD	Community Mobilizer	10.02.20
Furkat Kurbonov	Welthungerhilfe	Area Coordinator	11.02.20
Mr. Ortikov Abdusami	Hospital Penjikent	Head of Department of Health	11.02.20
Mrs. Hashin Zoda	Hospital Penjikent	Deputy Head of Health, resp. for Family Medicine	11.02.20
Mrs. Malika Rahmonqulova	Hospital Penjikent	Deputy Head of Health, resp. for Reproductive Health	11.02.20
Mirzomurod Samiev	Oxfam	Project Coordinator	11.02.20
Nargis Tosheva	Oxfam	WASH Project Officer	11.02.20
Adiba Mirzobadalova	Oxfam	WASH Project Field Officer	11.02.20
Ortuq Ortuqov	Oxfam	Economic Justice Project Officer	11.02.20
Ibrohim Ahmadov	FAO	National Project Coordinator	13.02.20
Malohat Shabanova	UNICEF	Nutrition Officer	13.02.20
Mariko Kawabata	WFP	Deputy Country Director	13.02.20
Ramazon Nurmamadov	JOVID	Chairman	13.02.20
Malika Makhkambaeva	USAID	Project Management Specialist	14.02.20
Annie Steed	USAID	Food Security + DG Team Lead	14.02.20
Natascha Bohlmann	GIZ	Project Director Improved Maternal and Child Nutrition Project	14.02.20
Karine Balyan	m4health	Team Leader	14.02.20
Sherali Rahmatulloev	MoHSPP	Consultant	14.02.20

Annex 3: Nutrition Friendly Programme Planning

The nutrition friendly planning of programmes is a multi-sectoral programme planning around nutrition goals and includes the following steps:

1. **Brief nutrition situation analysis** looking mainly at existing data sources and initiating a stock-taking exercise that includes an analysis of existing strategies, institutions, stakeholders and programmes. This assessment is to assist in analysing the current situation and identifying the needs, areas of gaps and opportunities to identify strategies and key priority areas for nutrition-sensitive development.
2. **Determination of the target population.** While for nutrition-specific interventions the target group is clearly defined around the life cycle, the target group for nutrition-sensitive interventions is often much broader. The direct target group of nutrition-specific interventions, namely female adolescents, pregnant and breastfeeding women, infants and small children, belong often to the secondary target group for nutrition-sensitive interventions and thus benefit indirectly. Nutrition-sensitive interventions are often focused on households and vulnerable population groups rather than on individuals.
3. **Collection of baseline information** by incorporating nutrition linked information into the baseline survey conducted at the beginning of each programme. Depending on the situation, detailed information might be already available through Demographic Health Surveys conducted by international organisations or the Government.
4. **Incorporation of primary nutrition objectives and targets** into programmes of the health sector to measure impact of nutrition-specific interventions and of secondary nutrition objectives and targets into other relevant sectors to measure impact of nutrition-sensitive interventions. It is generally understood by all major players (World Bank, EU, IFPRI, etc) that the incorporation of nutrition objectives into both nutrition-specific and nutrition-sensitive interventions is crucial for a successful improvement in nutrition. The EC states in a reference document for instance: "Nutrition-specific objectives need to be incorporated in the design of assistance programmes – whatever the sector or aid modality – thereby seeking and measuring specific results on nutrition.
5. **Elaboration of a detailed implementation plan** that includes well-defined nutrition-specific and nutrition-sensitive interventions and states how intermediate results and outputs will be tracked and thus will lead to the expected nutrition improvements using milestones, outcome and impact indicators.
6. **Systematic reporting against nutrition indicators** to improve outcome on nutrition.

While these steps can be applied when programmes and projects are newly planned to ensure strong impact on nutrition, existing programmes have to be analysed using a nutrition lens and improved accordingly. This includes the following steps:

1. **Review of nutrition sensitive interventions currently in place.** Stock-taking exercise of nutrition-sensitive activities and their indicators.
2. **Analysis of existing programmes concerning their potential harm on nutrition,** especially on the most vulnerable population groups. Identification of mitigation strategies in the case if existing programmes do harm the nutritional status of the most vulnerable population groups. For example, can time or physical constraints limit women's ability to feed their children properly. Studies have shown an association between work that requires mothers to be away from home for long periods of time and poorer nutritional status of their children. The table below describes potential sources for harm on nutrition and the linked potential mitigation strategies.
3. **Incorporation of nutrition indicators to existing programmes and projects.** This allows an early intervention if nutrition is jeopardised before greater harm is done through

projects and it also helps to fine-tune projects in order to achieve biggest impact on nutrition.

4. ***Incorporation of nutrition related activities to existing programmes and projects.*** For example, a homestead gardening project could include nutrition education and behaviour change communications to maximise its impact.

Avoiding harm – compilation of potential harms through programmes ^{36,37}

Potential Harm	Potential Mitigation Strategy
<ul style="list-style-type: none"> • Overburdening women who are also responsible for care of young children, with potential negative effects on optimal infant feeding • Potential negative impact of crop choice (especially considering cash crops) on food production, financial risk, and gender inequality • Inability of smallholders to participate in projects requiring new investment, and the danger of widening resource gaps between wealthy and poor farmers and out-competition • Higher food prices, through price supports or other reasons, can result in reduced availability of food • Danger of agrochemicals to health • Risk of disease from agricultural water use (microbes and pollutants in wastewater) and zoonotic disease and parasites • Reduction in natural resources availability or access • Higher production costs • Danger of mechanisation increasing unemployment among ladless • Manual labour can damage health and increase caloric needs • Health risks of over-promoting animal-source foods: chronic disease, and milk may displace breastfeeding • Increased production/reduced prices of foods that could influence diet patterns negatively and contribute to obesity and chronic disease 	<ul style="list-style-type: none"> • Introduce timesaving technologies for tasks commonly performed by women • Diversification and context analysis • Encouraging small-scale appropriate technologies • Protective gear and training • Improved wastewater management, veterinary services • Sustainable production techniques • Production and promotion around micronutrient-rich crops based on context • Include food consumption indicators to monitor consumption trends.

³⁶ FAO: Synthesis of guiding principles on agriculture programming for nutrition, September 2012

³⁷ World Bank, Rapid Social Response, DFID, Government of Japan: Improving nutrition through multisectoral approaches; Agriculture and rural development; 2013